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SOUTH AMERICA

FRANKLIN H. MARTIN


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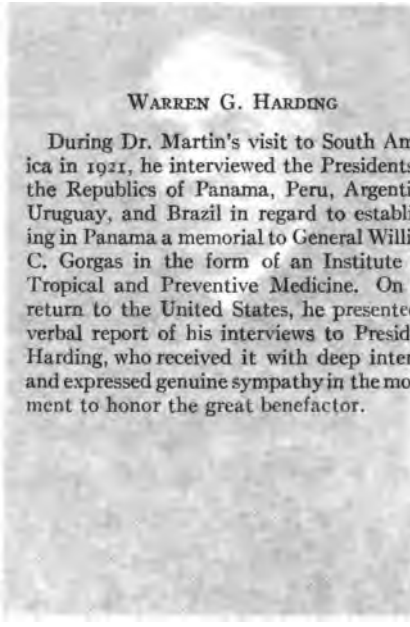
SOUTH AMERICA
FROM A SURGEON'S POINT OF VIEW



To Dr. Franklin H. Martin
With appreciation of a good comrade
and my best wishes.
Sincerely
Warren G Harding

WARREN G. HARDING

During Dr. Martin's visit to South Africa in 1921, he interviewed the President of the Republics of Panama, Peru, Argentina, Uruguay, and Brazil in regard to erecting in Panama a memorial to General Gorgas, C. (Gorgas in the form of an Institute for Tropical and Preventive Medicine. On his return to the United States, he presented a verbal report of his interviews to President Harding, who received it with deep interest and expressed genuine sympathy in the movement to honor the great benefactor.



WARREN G. HARDING

During Dr. Martin's visit to South America in 1921, he interviewed the Presidents of the Republics of Panama, Peru, Argentina, Uruguay, and Brazil in regard to establishing in Panama a memorial to General William C. Gorgas in the form of an Institute for Tropical and Preventive Medicine. On his return to the United States, he presented a verbal report of his interviews to President Harding, who received it with deep interest and expressed genuine sympathy in the movement to honor the great benefactor.

SOUTH AMERICA

FROM A SURGEON'S POINT OF VIEW

BY

FRANKLIN H. MARTIN, C.M.G., M.D., F.A.C.S.

Director-General, American College of Surgeons; Managing Editor, Surgery, Gynecology and Obstetrics

INTRODUCTION BY

WILLIAM J. MAYO, M.D., F.A.C.S.

NEW YORK CHICAGO

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LONDON AND EDINBURGH

1922

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FRANKLIN H. MARTIN, C.M.G., M.D., F.A.C.S.

FOREWORD

THE notes which appear on the following pages were gathered during two visits to the southern continent in behalf of the American College of Surgeons, the first in company with Dr. William J. Mayo of Rochester, Minnesota (then President of the College), and the second with Dr. Thomas J. Watkins of Chicago (a Governor of the College).

The first voyage was begun on January 7, 1920. We sailed from New York on the SS. *Ebro*, an 8,000-ton steel ship flying the British flag, and our itinerary included Jamaica, Panama, Peru, Chile, Argentina, and Uruguay.

On January 29, 1921, we again sailed from New York on the SS. *Ebro*. On this occasion we included in our itinerary all of the countries visited the previous year, with the addition of Brazil.

Dr. Francis P. Corrigan, a Fellow of the College, had preceded us on our second visit for the purpose of surveying medical conditions in Ecuador and Bolivia, and his interesting report is included in this monograph.

This little volume, therefore, which is in the nature of a report to the Fellows of the American College of Surgeons, is actually a collaboration, my own notes being supplemented by excerpts from articles by Dr. William J. Mayo and Dr. Thomas J. Watkins, and Dr. Francis P. Corrigan's report.

From the standpoint of the surgeon, the trip had interest in the medical schools, the hospitals, and the operating surgeons of the seven countries of this southern continent that we were privileged to visit. The short time at our disposal and the difficulties of transportation made it impossible for us to include Colombia, Venezuela, and Paraguay. However, visits to these countries will be undertaken as soon as proper arrangements can be made. Although the voyages were made in a purely professional capacity in behalf of the American College of Surgeons, one cannot properly describe them without relating some of the unusual personal experiences we enjoyed which will appeal to both the professional and the non-professional traveler.

It is only fair, and it affords me great pleasure, to give credit to the Travel Department of the American Express Company for conducting our tours and attending to all of the details of travel in countries, the languages of which were unfamiliar to us. No commission to any country ever had three more courteous and helpful conductors than were Mr. Walter C. Rundle, Mr. Charles LeMaire, and Mr. Albert K. Dawson.

I wish, too, to express my appreciation to Dr. L. S. Rowe of the Pan-American Union, and to his efficient staff, for helpful advice which they gave in regard to South American countries, and for valuable letters of introduction. Also, I wish to acknowledge my obligation to Miss Eleanor K. Grimm who accompanied us, compiled the summary of important historical and statistical data relating to the South American countries which appears in the addenda, and, in co-operation with Mr. Dawson, took many of the illustrative photographs and prepared them for publication.

In compiling our Spanish vocabulary we placed ourselves under obligation to Mr. W. J. Hernan, who has prepared several little volumes containing vocabularies of different languages.

FRANKLIN H. MARTIN.

INTRODUCTION

By William J. Mayo, M.D., Rochester, Minnesota

THEODORE ROOSEVELT, with characteristic courage and vigor, overcame all opposition and caused the Panama Canal to be built. The dream of nearly five centuries was realized. The whole world is forever Roosevelt's debtor. By the severance of the land connection between North and South America these two continents are now united as never before. The long, hazardous routes of travel of the olden time have been replaced by new ones, safe and speedy. The great war came so quickly after the completion of this epoch-marking achievement that it has not as yet touched Pan-American imagination.

After a trip to South America where, in company with Dr. Franklin H. Martin, I visited some of the important surgical clinics of Peru, Chile, Argentina, and Uruguay, where we became acquainted with and observed the methods of many surgeons, I take this opportunity to pay merited homage to these men of science, learned in surgery. It is but just to say that in their hospitals and operating rooms they are the equal of any representative group from any country in the world. They have that intuitive clarity of thought and facile mastery of technique which we associate, and rightly, with the French and Italian schools. The surgeons of South America have recognized for a long time the necessity of frequent clinical trips to observe the work of foreign surgeons; of late years many of them have come to the United States; it has been always a pleasure to know them.

Their medical schools are splendid institutions with a seven-year course, and are the equal in equipment and methods of theoretic teaching of any in the world. In South America "Commencement Day" means just that, for after graduation the young surgeon begins a special course of surgical training. Instead of carving his way to knowledge and experience by the scalpel, he is tutored for a period of from eight to ten years along lines which we of the United States have accepted only recently under the general term of fellowships in graduate medicine and surgery.

The hospitals of South America are imposing, built for the tropics, and associated with the medical schools. The hospital records are the best I have ever seen; this is true of every hospital we visited, small or large.

The reception given us by our South American confrères was most cordial, and we came away with not only admiration for the South American surgeon as a surgeon, but also with a feeling of personal friendship for him that will last for life. Whatever may be the after-war responsibility of the United States abroad, we can not question that our first duty is to develop a sound Pan-Americanism.

A Pan-Americanism of science, a unity of the spirit and ideals, will be more lasting than measures based on financial, commercial, or political considerations.

In 1921 Dr. Franklin H. Martin, Director-General of the American College of Surgeons, in company with Dr. Thomas J. Watkins, a Governor of the College, revisited the South American countries. They received the same cordial welcome that had been extended to the party the former year and the affiliation between the great surgeons of South America and North America begun in 1920 was furthered.

As such medical visits to South America have not been frequent it has seemed worth while to publish the account of both trips in book form in the hope that the surgeons of North America may have some little understanding of situations in our sister republics to the south and that others may be induced to travel in these charming countries, partake of the hospitality of their people, and learn at their source of the medical conditions. After considerable urging Dr. Franklin H. Martin kindly consented to undertake the task, and to his wife, Mrs. Isabelle Hollister Martin, are we indebted for interesting supplementary notes and for a few of the photographs which illustrate the text.

OUR ITINERARY

1920

January 7—Sailed from New York
January 13—Kingston, Jamaica
January 16 and 17—Panama Canal
January 22 to 24—Lima, Peru
January 26—Mollendo, Peru
January 27—Arica and Tacna, Chile
January 28—Iquique, Chile
January 29—Antofagasta, Chile
January 31—Coquimbo, Chile
February 1 to 14—Two weeks on shore with visits to Valparaiso, Santiago, thence by rail over the Andes to Buenos Aires, La Plata, and Montevideo, on the east coast.
February 14—Returned by rail to Valparaiso
February 29—Panama Canal
March 2—Kingston, Jamaica
March 8—New York

1921

January 29—Sailed from New York
February 2—Havana, Cuba
February 6—Cristobal, Panama Canal
February 11 to 13—Lima, Peru
February 15—Mollendo, Peru
February 16—Arica and Tacna, Chile
February 17—Iquique, Chile
February 18—Antofagasta, Chile
February 20—Valparaiso, Chile
February 21 to 23—Santiago, Chile
February 23—Los Andes, Chile
February 24—Mendoza, Argentina
February 25 to March 5—Buenos Aires, Argentina
March 6 to 9—Montevideo, Uruguay
March 12—Santos, Brazil
March 14 to 17—São Paulo, Brazil
March 18 to April 9—Rio de Janeiro, Brazil
April 19—Barbados, West Indies
April 25—New York

Itinerary of Dr. F. P. Corrigan

1920—1921

December 21, 1920—Sailed from New York
December 28, 1920—Panama
January 1, 1921—Guayaquil, Ecuador
January 5—Quito, Ecuador
January 10—Guayaquil, Ecuador
January 17—Callao, Peru
January 27—Antofagasta, Chile
February 1—La Paz, Bolivia
February 18—Antofagasta, Chile
March 7—Panama
March 18—New Orleans

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CHAPTER I

THE VOYAGE



IT is an ordinary experience to board an ocean liner and be deposited in one week in Liverpool or Cherbourg. It is, however, an *unusual* experience for a North American to board a commodious steamer for a sea voyage of several weeks to our southern continent. Especially is it unusual when one leaves the United States when the temperature is ranging from zero to 10° below, with the necessity for winter garments, and finds oneself three days out of New York in the warm Gulf Stream, with the tropics in anticipation, and summer clothing in demand.

On both of our trips to South America we sailed from New York upon the comfortable ship *Ebro*, drifted down the Hudson River, and passed the great skyscrapers and the Statue of Liberty. As we waved farewell to the Palisades, with their snow-capped columns, we realized that we were leaving the January winter of the United States and were started on our voyage to the southern continent and a summer climate. While the Statue of Liberty was still bestowing her silent blessing upon us, the liberty-loving Americans were gathering in the comfortable smoking room and drinking toasts to the snow-bound inhabitants of dry America.

After two days of cool weather, but a comparatively smooth sea, we enjoyed the sunshine and warmth of the Florida coast, with St. Augustine, Ormond, Daytona, Palm Beach, and Miami easily discernible.

The trip from New York to Valparaiso, with a few intervening stops at interesting ports, represents the first arm of the sea voyage which may be summarized by the one word "ideal." At no time was there a sea of sufficient roughness to cause one the slightest discomfort. The sun shone almost continuously, and there was but one rainfall, and that in the small hours of the morning when the ship's voyagers were



SS. EBRO

asleep. After passing Cape Hatteras the temperature on shore or ship was at no time above 85° F. or lower than 50°. It was possible to sit on deck at all times with light wraps or none at all, and, fanned by a cool breeze that was always present, read a book, dream over a cigar, or while away the time enjoying the companionship of old friends or those newly made, and at any time supply the inner man with the good things which were afforded by the well-equipped ship which was sailing on a sea that was always "wet." The climate for the entire period of our journey was like the most perfect June day in Chicago when a gentle breeze is blowing from off the lake. Considering these ideal weather conditions, and our splendid boat with canvas canopies over the broad decks, with much space in which to exercise, with comfortable chairs, with music in the lounge, with a well-stocked smoking room, with salt and fresh baths, with a swimming pool, and, to cap all, with comfortable beds and the usual, clean, plain table of a well-conducted English ship, supplemented by strange fruits from tropical parts, one would have to be especially difficult to please if he could not find here contentment and satisfaction. It must become the overworked and the tired man's paradise.

On our second trip we returned from Rio de Janeiro, also on a British ship, and it is pleasant to record that this arm of the voyage was equally ideal.

WHEN SHOULD ONE VISIT SOUTH AMERICA?

WHEN should a resident of the United States make a vacation trip to South America? This will depend upon the object of the journey and the tastes of the traveler, as well as his desire to recreate in a new world. The full thrill of a visit to South America, from a climatic standpoint, can be obtained by leaving New York in January or February, after one has experienced some of the severities of zero weather in our northern states. A most satisfying contrast is apparent between New York weather in those months as compared with that which is prevalent three days afterward in the Gulf Stream off Florida and the Bahamas, followed by the approach to Cuba, Jamaica, and Panama, with their delightful tropical atmosphere and a summer sea. In January and February the heat in the Caribbean Sea and the Pacific Ocean is not so intense as that which will be found later, when the sun is well back from its excursion to the southern zone. Therefore, the dreaded heat of the Equator is not to be feared in these early months, and when the perpendicular rays of the sun are met, the Humboldt Current along the west coast cools the sea and fans the atmosphere.



MORRO CASTLE, HAVANA

And when one reaches Peru, Chile, Argentina, Uruguay, and Brazil in February and March, while it is the summer of these countries, the climate is much like San Diego or Pasadena during the same months, the temperature varying from 65° F. to 85°, with cool nights, and comfortable days if one is not exposed to the direct rays of the sun. At this time of the year, the society people are residing in the country. But, unlike the custom in our country, the summer homes of these people are in rather close proximity to their winter homes—in the beautiful suburbs and nearby towns or country estates. However, at this season one cannot enjoy the attractive social features of winter life, with the operas, the theaters, the gaieties associated with the season's races, and the general winter life of the people in their city homes. For this reason the society devotée, the seeker of the gaieties of these attractive, cosmopolitan centers, the one wishing to study the people in the making of their laws, in their normal social intercourse, and in their educational institutions, should go to South America during their fall, winter, and early spring, or our May, June, July, August, September, October, and November.



DIVING BOYS, KINGSTON, JAMAICA



ADMINISTRATION BUILDING, CANAL ZONE

The surgeon and physician who desires a vacation and who will be satisfied to visit the hospitals and the medical institutions of South America at a time corresponding to our June, July, and August, will be more than content with the bird's-eye view of their institutions, with the novelty of travel, with the external beauty of the different countries, and with the consciousness that he is escaping the severe winter of our northern climate and enjoying an ideal summer atmosphere in the most fascinating environment.

To summarize: For charm of change from severe winter to most desirable summer, for a long sea voyage without heat or storm, for a view of the continent in its summer garb, for a visit to cities divested of the members of society but with much remaining to interest and please, leave the northern continent in January or February. For a view of the social life and of the society people living a normal and active life in the cities, and with disregard of the charm of change in climate, visit South America during their winter, our summer.


NORTH
AMERICA
UNITED STATES
SAN FRANCISCO
VANCOUVER
SEATTLE
MONTREAL
QUEBEC
NEWFOUNDLAND
NORTH
ATLANTIC
OCEAN
WEST INDIES
BRAZIL
SOUTH
AMERICA
PACIFIC
OCEAN
RIO JANEIRO
SAN PAULO
BUENOS AIRES
ARGENTINE

LOOK AT THE MAP

HOW few realize that the western coast of South America is on a line with the eastern coast of the United States! A plumb bob dropped from New York would pass to the east of Cuba, through the Panama Canal, and would hang on a perpendicular line in the harbor of Valparaiso. Realize that during the three weeks' cruise from New York to Valparaiso, directly south, there is not the usual distraction of changing one's watch. Realize that the western coast of the United States is nearly four thousand miles west of the most westerly point of South America and the Panama Canal. Realize that in traveling from San Francisco to Valparaiso or Lima one would change his timepiece one hour on three different occasions, and that the eastern coast of Brazil is fully as much farther east and more nearly approaches the longitude of England than of New York. Realize that the mountain ranges of South America border on the western coast and that many of their highest peaks are observable from the sea. Realize that these mountain ranges are full of the richest minerals and that they have been scarcely scratched by modern mining methods. Realize that a rainless coast and most beautiful valleys are lying below, ready to have the water from the mountains poured onto their soil, which will make them produce and become as beautiful as the reclaimed deserts of California. The prehistoric civilizations of Peru appreciated and utilized these facts and made themselves the envy of the later civilizations that conquered them for their wealth, and who now, after four centuries have passed, are about to imitate their methods, utilizing for the purpose all of the added facilities of modern science.

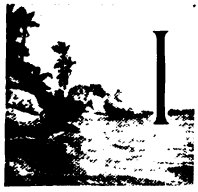


Belisario Porras

PRESIDENT OF PANAMA

CHAPTER II

ISTHMUS OF PANAMA



IN our dream days of youth and in our vision days of age we love to think of the tropical isle of Robinson Crusoe and to dwell in imagination on some far off lands of the South Seas. Thus we have visualized without thought of food or raiment, warmth and sunshine, a jungle of tropical green, and the bloom of unknown flowers; and we have traversed, far from the rule of man, the white sands of an unending sea.

Many of us have memories of these old dreams vivified for the first time as we approach and explore the state of Panama. This scene brings back our vision of the island paradise, the low white beach, the tangle of feathery green, the stately palm, the banana tree, the riot of color, the brilliant sunrise, the glassy sea, and the luxury of the balmy atmosphere.

But the illusion soon fades as we approach the marvelous steel and white concrete docks and their machinery of civilization. Here we find commingled our dream of a tropical island and the useful things of a world's commerce. Here the primitive overgrowth of the tropics vies unsuccessfully with man's ambition and civilization's efficiency, and the result is one that stirs the heart of the most stolid man or woman.

It is a competition between the luxurious growth of the tropics, vegetation, enervating heat, torrential floods, disease-bearing insects, and over-production of animal life with civilization's machinery, sanitary regulations which limit the growth of the undesirable, and an artificial climate produced by fans and refrigerating devices.

Here, after nearly five centuries of disease and pestilence in which human life was possible but never safe, has been builded a little kingdom that is already recognized as a health paradise on earth. It required a force as relentless as the forces of the tropics itself, a force dominated by intelligence, to succeed over almost overwhelming odds.



VIEW FROM TIVOLI HOTEL

The vision and the hopes of the engineers and of the sanitarians were presented to a man of action, a President of the United States, one not afraid to assume responsibilities. He said, "Yes," and the work was begun. The engineers said it would require a certain number of years to finish their task of digging the canal and that it would cost $375,000,000. The work was completed more than a year in advance of the time limit and cost $9,000,000 less than was estimated.

Two outstanding things made this possible: First (and I mention this first because it was paramount), the work of the sanitarians under the direction of General William C. Gorgas, work carried out on a plan that was not an experiment, because the same sanitarian had already proved the theory of the fundamentals on which his plan was based in his successful work in Cuba. Second, absolute arbitrary power bestowed upon the Chairman of the Commission of Construction—General George W. Goethals.

Perfect sanitation immediately transformed the Canal Zone into a health resort and the benevolent sanitarian who contained within himself the ability to comprehend the fundamental and detailed requirements of his job, to command men, and to establish a habit of efficiency among his army of helpers

accomplished the stupendous task, and one of the wonders of the world was completed.

And now it is finished! We have looked admiringly upon the little kingdom of Monte Carlo with its natural beauty, its artistic architecture, its palaces of play and state, a plaything among the countries of the world. But it becomes insignificant beside the state of Panama. These two little territories are the antithesis of each other in their uses; but in their beauty, in their government, in their extent of territory, and in their wholesomeness they are similar. Each is governed by an autocrat whose word is law and between whom and his people there is no appeal. For the Zone at Panama through which pass the ships of the seas is under the jurisdiction of a governor whose arbitrary rule is absolute.

And is there not a satisfaction in knowing that efficiency still prevails and that politics, even five years after the real task is finished, has not dared to break the charm, and that worthwhile and disinterested methods still prevail! One has no difficulty in recognizing that efficiency has become a habit. The great machine itself is managed by an army of contented and proud people who are spurred on by the fact that they are a part of one of the greatest mechanisms that man has perfected.

In the towers that command a view of the respective locks and of the canal site there are actual models of the entire system which duplicate in miniature the action of all of the locks. The operator and his assistants who are stationed in these towers open and close the great gates by means of electric keys as the ships enter and leave, and by the duplicating work of the models before them they verify their outlook and judge as to the accuracy of their every movement. Within these towers with their autocratic operators are confined power, accuracy, and comprehensiveness, and all movements of ships traversing the canal are controlled and directed from here.

And the governor of this fortunate land has built a little kingdom which honors and controls the people within his domain. All is dignified and in perfect harmony with competing nature, which covers every roof with moss and every crevice with a vine. This harmony is maintained in the warehouses on either coast; the palatial repair docks where ships from every country are hospitably welcomed; the bungalows with their screened-in porches and their red-tiled roofs for the comfort of the official and of the working mechanic; the administration palace on its point of vantage with its garden approach; the barracks with graceful lawns between the artistic



GENERAL VIEW OF THE ANCON HOSPITAL

buildings; the broad parade grounds and extensive recreation facilities for golf, tennis, bathing, and motoring; the concrete roads and boulevards running to all points of vantage; and the system of hospitals that are the pride of every American physician who visits the Canal Zone.

These hospitals which have been built and are controlled by the government are the last word in scientific construction. The Colon Hospital on the eastern or northern coast and the Ancon Hospital on the western coast accommodate five hundred and eight hundred patients respectively and afford accommodations not only to those who are connected with the Canal Zone work, but also to private citizens.

The Ancon Hospital was built at a cost of about $2,000,000, and its equipment cost $1,000,000. It occupies an ideal position on Ancon Hill, overlooking the city below, the administration building, and the new Balboa village at the point of entrance. This building with eight hundred beds, which in an emergency can accommodate five hundred more, has a staff of thirty-five physicians, six internes, and approximately one hundred nurses. Colonel Louis T. Hess of the Medical Corps, United States Army, is in charge at the present time.

The government of Panama is now constructing a large and up-to-date hospital in Panama City on the old exposition grounds down by the sea. It will displace the present St. Thomas' Hospital and will be called the New St. Thomas' Hospital. The superintendent of this hospital is likewise a United States Army medical officer, Major Edgar A. Bocock. There are also several private hospitals conducted on the highest scientific plan.

The United States government has absolute jurisdiction over sanitary arrangements, not only in the Canal Zone but also in the adjacent cities of Colon and Panama. The surveillance is just as carefully maintained at present as it was under General Gorgas in the days of construction. Colonel Henry Clay Fisher, the Chief Sanitary Officer of the Canal Zone, is one of General Gorgas' old lieutenants, and he has kept alive all of the traditional ideals that have made the sanitation of the Panama Canal the wonder of tropical medicine. Colonel Fisher also has instilled in him the habits of efficiency which are so essential and so much a part of the Canal's success, and that made sanitation possible in a tropical country.

The Canal Zone must forever maintain a court of discipline and social custom in its official life that is in current use in the highest courts of the nations of the earth. It is to be hoped that it will maintain its present dignity and that service and



LABORATORY OF THE ANCON HOSPITAL

not trappings of office will always prevail in the ideals of its devotées. The inevitableness of the maintenance of a high personal social status lies in the fact that the Canal will be visited from time to time by the great ships of the navies of the world and the traveling people of culture of all nations. The Canal Zone will become more and more attractive to everyone when its reputation for beauty and its climatic charms are better known.

The perfection of the Canal construction has been severely tested on several occasions. In 1919 the Pacific Fleet of our navy, consisting of 175 ships including dreadnaughts, passed through the Canal from the Pacific Ocean to the Atlantic. The U. S. S. *Mexico* and the U. S. S. *Mississippi* were 624 feet long and 97¼ feet wide, with a displacement of 32,000 tons and a draft of 31 feet. The length of the locks is 1,000 feet, the width 110 feet, and the depth 40 feet. The time required for the passage of each ship was ten hours. In 1920 when the Prince of Wales was on his way to Australia, his ship, the H. M. S. *Renown*, having a length of 795 feet and a draft of 30 feet, made the trip without incident.

About two weeks before the writer visited the Canal Zone in January, 1921, the Atlantic Fleet passed through the Canal to join the Pacific Fleet, and in a little more than a month it returned. These two passages occurred without accident or delay. They were supreme tests.

COLON AND THE CANAL

FROM the log, 1921. In the morning our ship steamed into the harbor of Colon and we landed on the Isthmus of Panama. Earlier, small clouds on the horizon obscured the sun and the flat lands of Colon were not yet in sight. At eight o'clock the low lines of the coast appeared and the shipping of Colon came into view. War ships and commercial ships from all over the world were everywhere about. We took on the pilot, the quarantine officers, and the customs men, and slowly slid alongside one of the large, substantial, clean docks

As we approached this gate to the great water-cut we enjoyed the same beautiful scenes we had looked upon previously —the coast-line of billowy, feathery green of the jungle, with here and there a two-story, red-roofed, screened-in government employee's residence, a hospital or an office building, and royal palms occasionally projecting above all like great feather dusters.

We did not have to wait until we reached South America to feel the warm handclasp of welcome. When we first landed

at Panama, standing on the dock at Colon was our friend, and the official Sanitary Officer of the Canal Zone, Colonel H. C. Fisher. We last knew him in the Surgeon General's office in Washington during the strenuous days of the war. He was in uniform, appearing almost boyish in his white helmet, and his face was good to look upon.

In Colon we observed "the system," which is exemplified in the well-built docks, and the loading and unloading, icing, and cooling facilities furnished alike to the ship traffic of the entire world. Shortly we took a special train for our ride across the Isthmus. Our first stop was at Gatun Locks, just to the east of Gatun Lake, which is twenty-eight feet above the Atlantic Ocean. From this vantage point we looked about and saw the great spillway that carries off the surplus water, and that also creates the electric current that furnishes light and power for the gigantic machinery of the Panama Canal; the attractive towers from which the operators control by electric buttons the seemingly intricate mechanism; the traction engine and the engineer who guides the various ships through the great locks that will accommodate any vessel, regardless of size; the emergency gates standing idle waiting for the unforeseen. However, the real charm is in the warm and balmy atmosphere, in the soft blue mist, in the little mountains which extend north and south and connect the mountain ranges of the two Americas, in the velvety sward that we walk upon, fashioned by nature from fern-like grasses and the little vine with the miniature purple daisy, in the watch-like perfection of it all, in the little villages with their red-roofed houses the white fronts of which are covered with red and purple bougainvillea, all guarded by royal palms and buried in ever-growing tropical green. While many of the miniature mountains were cleared of growth in the construction of the Canal, a carpet of smooth green remains and extends to the water's edge.

We skirted the great lake created by the overflow and were fascinated by the dead trees on whose tops rested orchids and other parasitic growth. We disembarked from our train and went through Culebra Cut on the little submarine chaser, the *Gold Star*. The quicksand-like bottom of the Cut is being elevated continuously by the pressure from the mountain-hills on either side, and there is nothing to do but scoop out the earth with their great dredges, either until there is no bottom or until the two mountains have been hauled away. After passing through the Cut, we again boarded our train and passed through the slip to the Pacific. Everywhere are the purple mist, cleanliness, and signs of the careful husbandman.



GATUN LOCKS

It is here that Gorgas did his magnificent work in building an everlasting monument to the people of the tropics. As it was once the pestilence spot, it is now the health garden of the tropics.

PANAMA

WE passed through Balboa with its new administrative buildings of Spanish architecture and the Ancon Hospital resting on the terraced hill, and arrived at the Panama station, whence we were hustled to our hotel, the Tivoli. All we had seen on the Isthmus was beautiful when last we viewed it, but on this second occasion there was no disappointment; it was more beautiful than ever. Surely Panama must become one of the great resorts of the world.

After luncheon we drove through Balboa, out to Fort Amazon, and over the causeway which has been built from the earth taken from Culebra Cut to the nearby islands that are so wonderfully fortified for our protection. Looking back, we saw low-lying Panama with its attractive towers and its substantial Spanish architecture. On our return we drove through the streets of Panama. As it was the week preceding Lent



MAJOR GENERAL WILLIAM C. GORGAS, M.C., U. S. A.

the carnival, which is celebrated in all Latin-American countries at that time of the year, was in full sway. Beautiful children, and young men and women with skin of all shades, brilliantly dressed but in good taste, were here holding forth in innocent gaiety.

We saw some of our numerous friends of war-time, among them Colonel Greenleaf, Sanitary Officer of Panama; and Colonel Hess, in charge of the Ancon Hospital. At a reception we met the principal members of the medical fraternity of this little Republic. We were particularly interested in the inspection of the City of Panama under the guidance of Dr. Braithwaite. We also inspected the site for the new St. Thomas' Hospital, visited other points of interest, and had luncheon with our professional friends on the broad balcony of the Union Club, which overlooks the Pacific.

MAJOR GENERAL WILLIAM C. GORGAS, M.C., U.S.A.

IT is now well recognized that the Panama Canal could not have been completed if it had not been for the sanitary regulations that were devised and enforced in connection with the work of digging and constructing. The Medical Corps of the United States Army was responsible for this accomplishment. This Corps, through the self-sacrifice of its members, revealed the course of malaria and yellow fever, and discovered and applied the remedy. The miracle of the completion of the Panama Canal could not have been attributable to Theodore Roosevelt alone even if it had been necessary to occupy much more territory; nor to General Goethals alone even if the Culebra slides had been multiplied ten times; but to that lovable man who, with his associates of the Medical Corps of the Army, applied the rules of modern sanitation, rules based on fundamental discoveries, and administrative regulations formulated by this same great scientist, the late Major General William C. Gorgas.

One does not wonder that General Gorgas loved the beautiful spot that his genius made possible, and that he saw rise from a tropical jungle of pestilence to a paradise for men—the destined garden spot of the world.

Once while General Gorgas and the writer were waiting for an interview in the office of the Secretary of War, we spoke of the horrors of the war in which we were both so busily engaged. I remarked to the General that it must seem to him that fate had pursued him pretty closely; after all the work he had done in sanitation to be suddenly called upon to raise

an army of civilian doctors for the greatest war of history. "Yes," he said, "I wish the horrible war were over." I said, "What is the very first thing that you would do, General Gorgas, if tomorrow morning, before arising, you should receive a telephone message assuring you that the war was ended"? "Do you know what I would do"? he asked, while his eyes had a far-away, wistful expression. "I would ring off, call New York City, and order a passage for South America. I would go to Guayaquil, Ecuador, the only place in which yellow fever is prevalent, exterminate the pestilence, and then —and then return to Panama, the garden spot of the world, and end my days writing an elegy on yellow fever."

And this was not the mere day-dreaming of a man overwhelmed by a stupendous job, but the real yearning of a peace-loving man, who, within a month after the armistice, accepted a commission from the Rockefeller Foundation to go to Guayaquil, Ecuador, to do the very job that he wished to do.

While Dr. Mayo and I were visiting the President of the Republic of Peru, he spoke affectionately of General Gorgas and said that three of the South American Republics—Peru, Ecuador, and I believe Colombia—had appointed General Gorgas the official Inspector-General of Sanitation for the western coast. Unfortunately, we missed General Gorgas at Panama, as he was on his way south and we had passed each other en route without realizing it. General Gorgas died on July 4, 1920.

PRESIDENT BELISARIO PORRAS—GORGAS MEMORIAL

BY appointment, we called on Señor Belisario Porras, President of the Republic of Panama. The purpose of my interview with the President was to discuss with him the proposed memorial to General Gorgas, a memorial that will be an object lesson to the people of the future; that will typify that great man's character; and that will carry on the work that his genius has organized and that his industry has so successfully administered.

Señor Porras is sympathetic to and is taking the initiative in a plan that would establish in Panama such a monument—a great laboratory in which could be conducted a research in tropical diseases; a working place that would attract the distinguished research workers of the world; a school that would disseminate to the practitioners of medicine from all countries the knowledge that is required by them.

In this country the plans are being developed by Rear Admiral William C. Braisted, M.C., U.S.N. (Retired), and Señor Don J. E. Lefévre, Chargé d'Affaires, Panaman Legation, Washington. This committee has completed an organization known as the Gorgas Memorial Institute of Tropical and Preventive Medicine of Panama. The first Board of Directors consists of the following: President of Panama, Dr. Belisario Porras; President of the Panaman National Public Health Board; Rear Admiral William C. Braisted, Surgeon General, U.S.N. (Retired); Honorable John Bassett Moore, Judge of the Permanent Court of International Justice, New York; Dr. Franklin H. Martin, Chicago; Surgeon General Merritte W. Ireland, U. S. Army; Surgeon General Edward R. Stitt, U. S. Navy; Surgeon General Hugh S. Cumming, U. S. Public Health Service; and Dr. Leo S. Rowe, Director General, Pan American Union, Washington, D.C.

CANAL ZONE AND THE REPUBLIC OF PANAMA

By W. J. Mayo, M.D.

"LESS than two days' sail from Jamaica across the Caribbean Sea brings the traveler to the Canal Zone. In approaching Colon one is close to 'the rim of the world' and may look on both sides. On the north is seen the polestar with the Big Dipper, and on the south, close to the horizon, the Southern Cross with its two pointer stars. The clean, wholesome city of Colon, the wonderful docks and locks of the Canal, and the beautifully kept port of that part of Panama City which lies within the Zone inspire pride in the American and the wish that the government could be as well enacted at home. Everything is spotlessly clean, and everywhere the dreaded mosquitoes and flies are absent, an imperishable monument to our revered Gorgas. The supply of water is abundant and pure; the hotels are fine and under government regulations.

"The sanitation of the City of Panama outside the Canal Zone is also under United States government control, through the agency of the able sanitarian, Dr. Goldthwaite. Within the Zone the sanitation is under the capable and energetic supervision of Colonel Fisher of the Regular Army Medical Corps. Colonel Greenleaf, who during the war had charge of the military hospital at Fort Snelling, Minn., is now commanding military medical officer of the Zone.

"The splendid hospital at Ancon, located on the slope of Ancon Hill, in the Canal Zone, was built by the United States



COLONEL HENRY CLAY FISHER, M.C., U. S. A.
Chief Health Officer, Canal Zone, Panama

government. It is constructed of brick and cement, and all installations are the best and are up to date. Colonel Hess, who is in charge, is a fine surgeon of scientific training and broad sympathies. The ordinary capacity of the hospital is 800 beds, but it may accommodate 1,400 patients. Pay patients are admitted. The surgeons' fees go into the general fund of the hospital. Seven and one-half dollars a day is charged for a private room, and $2 extra for private bath. Nurses are supplied for $5 a day on an eight-hour day schedule. Thus room and adequate nursing costs $24.50 a day. The people of average means cannot, of course, procure such attention, but they have access to the wards at $3.50 a day. Employees of the government are cared for in the wards free of charge, and in private rooms with a reduction of about 25 per cent. from the regular price. There are about eighty registered nurses and a nurses' home, but no training school.

"In the City of Panama the Republic of Panama has a hospital of 500 beds. It has a training school for nurses of various tints; very few are white. Any licensed physician may bring patients to the hospital and operate. This means an unrestricted staff. Under the progressive management of the government of Panama, plans are being made for a splendid new hospital to be built on fourteen acres of land, a peninsula projecting into the ocean."



OLD PANAMA

CHAPTER III

PANAMA TO PERU



E left Panama in the evening and were southward bound in the Pacific off the shores of South America. A feeling of contentment comes from the freedom of cares, the comfort of one's surroundings, and the anticipation of many warm days with spicy breezes and the lull of the ocean, the latter seeping deeper and deeper into one's blood. When we were three degrees from the Equator we experienced one of our most comfortable days. It was warm but not hot, with a cool breeze that was invigorating. In the evening we sat upon the deck and studied the strange skies in an endeavor to become acquainted with the new map which was replacing the old as we proceeded southward.

During the day we lazily whiled away the hours with reading, not too strenuously pursued, in looking at the deep blue moving waters, just dreaming, or rejoicing in our situation of comfort.

In a clear, yellow sky we watched a very large, red sun slowly sink into the purple waters. First its lower rim was dipped, gradually it descended, and finally after one last peep of its upper edge it was off to China. Then a momentary glow quick darkness—and the bugle call to dinner.

In the cheerful dining saloon an orchestra was playing unobtrusive music. Our little group of six was happy and carefree, with appetites for a good dinner and the cheer of the light Chilean wine to which Comrade Winn had introduced us. Then the long evening conversationing on deck (this being Sunday, no bridge), near gossip, and sheer nonsense which keeps the unstrained nerves unstrained.

We were planning an Equator party for the following evening. Our Northern dear ones were to be invited, transported by magic, and given an evening with us in our floating palace, to demonstrate to them the charm of the tropical seas, intro-



FATHER NEPTUNE HOLDS COURT

duce them to Father Neptune, the host, and in the wee, small hours of the morning, after they had accepted of our hospitality and viewed the Southern Cross, those who would choose not to remain with us were to be sent back to the frosty cold winds and the horrible steam heat of the north.

Equator Day. Clouds obscured the sun and a brisk breeze came from the southwest. The temperature was from 70° F. to 80°, and it was delightful on deck for loafing, reading, playing, or reflecting. Spent most of the day reading and writing.

At noon the whistle blew and we all rushed to the rail to see the Equator. The evening before the Captain had announced that the next day at four o'clock Father Neptune would hold court on the forward deck; that all who had not been initiated should be prepared to join the guild.

Father Neptune Holds Court. Accordingly at four o'clock a band was heard. Fife and drum were leading a procession in which were Father Neptune, with long flowing robes, hair and whiskers; his wife, a beauty with masculine beard; the doctor and barber, appropriately garbed and carrying necessary implements of their professions; and a following of big, stout athletes who were delegated to subdue the obstinate. The

ceremony took place at the side of a large swimming tank of sea water in which sported half a dozen athletes in bathing suits, waiting to duck their victims.

A number of our passengers, men and women, were put through the following paces: Formal introduction to Father Neptune and his lady; examination by the doctor with stethoscope, thermometer, and tooth forceps about ten times the normal size; administration of varicolored medicines; appliance of lather (flour and water paste) by the barber and an attempt to shave with a four-foot razor. During the latter procedure the victim was seated with his back to the swimming tank and at the opportune moment was pushed back into it by the attendants. The last fellow who was brought on continued his struggles until all of the members of the Neptune party were in the tank, with the paraphernalia of their high offices scattered about them.

It was interesting; but it was rough play and ruthless. He who resisted was destined to hard usage. In the evening all who were present at the function received their diplomas, certifying that they had become members of the great Neptune family and were privileged to cross the Equator at any future time without molestation.

Fancy Dress Ball. In the evening we had a fancy dress ball, followed by a dance. We young folks enjoyed it much while the middle aged and older ones looked on with tolerance.

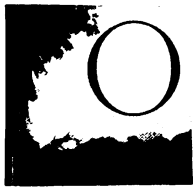
No day could have been more perfect than our Equator Day—that day that we had been dreading for months. The only disagreeable feature of this delightful loafing tour was the fact that we had to land occasionally.



PRESIDENT OF PERU

CHAPTER IV

PERU



N our first voyage on anchoring at Callao, the port for Lima, our ship was soon besieged by launches, and in one of the first was Antonio Graña, Esq., a business man of Lima, who came to pay his respects to Dr. Mayo. His launch was followed by another with a group of Lima surgeons, representing the Sociedad de Cirugía del Perú. We were informed by Drs. Aljovin, Graña, Gastañeta, Denegri, and Morales of the committee that we were to take automobiles from Callao to Lima and become the guests of the Society at the Hotel Maury during our three days' stay in Lima.

Lima, originally an inland city, has, by suburban extension, practically joined hands with the sea-coast city, Callao, and by railroad, tramcars, and motor roads these two cities have become practically one, extending from the blue Pacific into the arms of the foot-hills of the Andes ten miles away. For three hundred years this city was the metropolis of the southern continent, and, according to a quotation, it was "the center of vice-regal court whose splendor and gaiety vied with that of royalty itself."

The eight-mile motor trip along the sea boulevard was most enjoyable, as it gave us the first shore glimpse of this rainless country. Here is the rock-bound coast, brown with age, and indented with great crevices. The dust of ages has sifted down to the base of the rocks, to be licked up by the surf of the sea. And this is but a sample of the rainless coast of this continent which extends for hundreds of miles north and south.

Our days were full, the intervals between conducting the business of our mission being crowded by hospitable attentions which were accorded to us by the surgeons of Lima and Callao, the government of Peru, and our own United States representatives residing there. Before disembarking, we were welcomed by our American Consul and the Chargé d'Affaires, representing

the American Embassy, who bore invitations for us to visit the Minister of Foreign Affairs and the President of the Republic that afternoon. Dr. Guillermo Gastañeta was our host at luncheon at the Botanical Gardens, one of the residual acquirements of great value of a recent national exposition. A group of surgeons of Lima were additional guests.

At four o'clock, Mr. William Walker Smith, the Chargé d'Affaires, visited us and we made official calls upon the Minister of Foreign Affairs, and afterward on the President of the Republic. The palace of the President was built by Pizarro in about 1540, and occupied by him as his official residence. While waiting we were shown the spot where Pizarro was assassinated, and were then conducted by relays of red-coated officials to the executive apartments. There we were met by the secretary, who took us into the audience chamber where the President, Señor Augusto B. Leguia, greeted us. He is an attractive, vivacious man of rather small stature who speaks English perfectly, and we were soon engaged in an animated discussion of our mutual friend, Major General William C. Gorgas. The President reminded me of our own ex-Secretary of War, Mr. Baker—the same keen, intellectual type of man.

That evening Dr. Juvenal Denegri, president of the surgical society, gave an official dinner that was attended by about sixty men and women. This was an elaborate banquet given at the Botanical Gardens, and it was an affair that emphasized the exquisite taste of these delightful people. An address directed to the President of the College, Dr. Mayo, was read by Dr. Denegri. Dr. Mayo formally responded. This occasion added to the cordiality of our reception and stamped it as official. In this evening group we met the women, the wives and daughters of our hosts. They are vivacious, cultured, and deeply interested in the problems of our country. They are women of beauty and are thoroughly cosmopolitan. They love music and art, and usually speak French and not infrequently English. The women who accompanied us admired their French-model gowns.

The next day we, together with the ladies of our party, were entertained by Professor Miguel C. Aljovin at a luncheon at his home, the first luncheon in which an attempt was made to give us Peruvian dishes exclusively. The Peruvian cooking appeals to me and to those whose palates crave highly seasoned and spicy sauces. At this time we were served many varieties of strange dishes for which we could have cultivated a genuine liking in a short space of time. The dining room opened onto a patio filled with flowers, growing palms,



INTERNATIONAL CLUB, LIMA

and cages of highly-colored birds who vied with a mandolin orchestra, which was playing Peruvian airs. Here we succeeded in getting the home atmosphere of the people of Lima.

The following day Dr. Denegri entertained us at luncheon at the International Club, and in the evening we were the guests of Antonio Graña, Esq., at a dinner at his interesting residence. In the afternoon we attended a garden party at the American Embassy, given by Mr. and Mrs. William Walker Smith. There are many memories that will frequently hark back to our visit in Lima. The unobtrusive but continuous hospitality of these people, with their cosmopolitan ways and cultivated minds, is something that we can never forget. Our welcome was not by any means wholly official, as there was much that was personal, because of the affection that many Peruvians have for our chief, Dr. Mayo. Not until we had been deposited on our ship, loaded with fruits and other dainties, and our adieus had been said, did we realize to the full the friendships that we had made.

ONE year later we returned to Lima and were then the guests of our friend, Dr. Juvenal Denegri, at his home in beautiful La Punta, a summer suburb of Callao and Lima.

A luncheon was given for us at La Punta on the afternoon of the first day of our visit, and the same evening we were the



DR. FRANCISCO GRAÑA

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University of San Marcos, Lima

guests of the Sociedad de Cirugía del Perú at a banquet held in the Botanical Gardens of Lima.

We were kept very busy exploring this romantic city, which was the center for the Spanish adventurers who conquered Peru and destroyed an ancient civilization. We visited the Cathedral where lies the conqueror and the conquered, Pizarro, and the museums in which are preserved the relics of the Incas; we viewed again the mountain sentinels that surround this old city, the narrow streets, and splendid monuments; we took a sea drive along the rugged coast, and listened to the cheer of children; we admired the stolidity of the Indian police, absorbed the atmosphere, and enjoyed the charming friendship of the interesting people. In two days we endeavored to accomplish the impossible—gain an impression of Peru's historical and physical charm.

While modernizing influences have been somewhat slow in coming to this secluded country of the western coast, now, with many of its resources ready for more full development, and with transportation open through the Panama Canal, a great speeding-up of this country's progress will occur.

DR. MAYO'S OBSERVATIONS ON PERU

"GENERAL GORGAS freed the country from yellow fever, but the disease is still to be found in the sparsely inhabited back country, both in northern Peru and in Ecuador. General Gorgas was engaged by the Peruvian government to continue the work of eradication, and it is hoped that yellow fever will soon be a thing of the past.

"In 1532, just forty years after Columbus discovered America, Pizarro with 310 soldiers landed in Peru and overturned the Empire of the Incas. In 1535 he founded the city of Lima, which now has about 200,000 inhabitants. On viewing the mummified remains of the 6-foot buccaneer lying in state in the Cathedral, one visions the great mental and physical force of this man who subjugated Peru in nine years, from the time of his landing to his assassination.

"Peru is a vast country, half of it unmapped and scarcely explored. Between the Andes and the Pacific lies a narrow strip of land on which there is no rainfall. It has not rained in Lima for seventeen years, but the dust and general grime are forgotten in irrigated spots containing beautiful trees and flowers. Lima is 2½ miles from the ocean, with its port at Callao 8 miles away. The Humboldt Antarctic Current, flowing along the west coast, keeps the climate pleasantly cool, but condenses



DR. MIGUEL C. ALJOVIN

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University of San Marcos, Lima

the moisture in the air between the coast and the Andes and thus prevents rainfall. The lack of water is painfully apparent in Peru and has much to do with sanitary failures which even the dryness cannot wholly overcome. The country is tropical; and while the air is cool in the shade, it is very oppressive on exercise or in the sun.

"The noon siesta, a custom of the country, undoubtedly is based on human needs, for it recuperates the body from the results of the heat on the tissues, especially the nerve tissues. By dividing the day into two parts, the strain of the most trying hours in the climate of Peru and other tropical countries is reduced, and what might be called a protective neurasthenia, greatly resembling the neurasthenic state seen in the United States, is developed. Certainly the siesta, a two hours' rest in bed after the noon meal with the removal of day clothing, is useful in the treatment of neurasthenia. In the high valleys between the mountain ranges are fertile plateaus, the home of the Incas. The Amazon River, rising in the Peruvian Andes, has a port at the city of Iquitos in Peru which harbors vessels of considerable size. A railroad is being built connecting Iquitos with the Peruvian coastal plains."

THE SURGEONS

THE Sociedad de Cirugía del Perú is of recent origin, and was established along the lines of the successful societies of the United States and Europe. The organizers have had the courage of their convictions and have carefully selected their members. They have built themselves an attractive home in which to meet, to house their literature, and to entertain the stranger. The membership is limited to surgical specialists, and its members do not yet number twenty.

Nowhere in the world, I am sure, can the modern surgeon find himself more at home than among the surgeons of Peru; they are all men of the highest type; they are educated and possess the culture that comes from travel and study abroad, and they are conversant with at least one language besides their own. Nearly all of them speak French, a large percentage some English, and many of them converse with ease in the English tongue.

When we consider the personnel of these hosts of ours immediately come to mind the following: Dr. Miguel C. Aljovin, surgeon of the Maison de Santé, honorary member of the Faculty of Medicine; Dr. Constantino J. Carvallo, professor of descriptive anatomy; Dr. Juvenal Denegri, professor of otology, rhinology and laryngology, surgeon to Santa Ana Hospital;



DR. GUILLERMO GASTAÑETA

Professor of Clinical Surgery
University of San Marcos, Lima

Dr. Guillermo Gastañeta, professor of clinical surgery, surgeon to Dos de Mayo Hospital; Dr. Francisco Graña, professor of surgical pathology, surgeon to Guadalupe Hospital; Dr. Carlos Morales Macedo, professor of applied anatomy, surgeon to Guadalupe Hospital; Dr. Carlos Villarán, professor of clinical surgery, surgeon to Military Hospital; Dr. Mariano Alcedan; Dr. Eduardo Bello, professor of gynecology, Faculty of Medicine; Dr. Manuel J. Castañeda, professor of surgery; Dr. Enrique Febrea Odriozola, professor of obstetrics; Dr. Juan J. Mostajo, surgeon to Italian Hospital; Dr. Ricardo Palma, instructor of anatomy of the Faculty of Medicine; Dr. Ricardo Pazos Varela, professor of genito-urinary surgery, surgeon to Dos de Mayo Hospital; Dr. Luis de la Puente, surgeon to Maison de Santé, honorary member of the Faculty of Medicine; Dr. Belisario Sosa Artola, professor of syphilis and skin diseases, surgeon to Bellavista Hospital.

Comments by Dr. Mayo on the Surgeons of Peru

"LIMA has 120 physicians, twenty of whom are surgeons. The surgical technique is far in advance of hospital installation, and the highest praise should be accorded these men for their excellent work, which is further illustration of the fact that surgical results depend on the surgeon and not on his surroundings. I attended many interesting clinics and saw Dr. Gastañeta, Dr. Aljovin, Dr. Carvallo, Dr. Denegri, Dr. Morales, Dr. Graña and others doing clean, careful, and skillful surgery. Physicians qualified to do good roentgen-ray and cystoscopic work are needed in Lima."

Dr. Watkins' Remarks on the Doctors of Peru

"THE doctors, collectively, excel socially and professionally the doctors in the United States. This is due to the condition of 'caste.' Only members of the aristocracy have sufficient money to study extensively at home and abroad. A college education is required for medical school matriculation. The only medical college in Peru is a department of the national university at Lima, but it is independent in management and finances. The course of study is seven years. Following graduation, most of the doctors serve interneships and take postgraduate study in Europe or the United States, and often in both. As the hospitals have no trained nurses, the medical students do much hospital work. On graduation, they receive the degree of physician and surgeon. Should a position on the medical fac-

ulty be desired, a degree of doctor of medicine is required. The Sociedad de Cirugía del Perú has made this one of the requirements for membership in the American College of Surgeons."

Dr. Mayo on Education in Peru

"SAN MARCOS University in Lima, the oldest in the Western Hemisphere, was founded in 1551. Señor Ngarteche Prado, president of the University, is a talented gracious gentleman, fully equal to the duties devolving on him in the management of this great university, the only one in Peru, with its 4,500,000 inhabitants. The university medical school is also in Lima and is the only one in Peru; it has about 300 students. The spacious buildings are in beautiful grounds. Dissecting material is ample. The laboratories in charge of Dr. Hercelles, professor of bacteriology and pathology, are excellent. There are many unusual and beautifully preserved specimens in the museum of the medical school and in the laboratories. The university impresses one as being in every way a real teaching institution.

"Primary school education, a course of six years, is compulsory in Peru; the secondary course of six years has a limited attendance. The medical student must add to the two courses two years of science and seven years of medicine, making in all nineteen years of study to obtain a medical degree. The exceptional student can reduce this period two years. Medical students are much alike the world over, and one of their great virtues is their independent spirit, with little respect for tradition or authority. To the medical student Thomas must be the greatest of apostles. Our reception at the medical school by the faculty and the students was most impressive and formal."

Dr. Watkins on the Medical School

"THE medical school occupies an entire block in a desirable part of the city. It is of the Spanish type. There is an administration building and a separate building for each department—all one story high. The buildings, which are flush with the sidewalk, surround a garden of tropical vegetation and flowers, and the entrances to the various buildings, except the administration building, are from the garden.

"The whole aspect of the medical school suggests that our medical schools in the States lack in appreciation of art and of sentiment."



PATIO OF MEDICAL SCHOOL, UNIVERSITY OF SAN MARCOS, LIMA

Dr. Mayo on the Hospitals

"PERU has much to interest the medical sightseer. All through South America the hospitals are of Spanish design, excellent for the tropics. They are usually of one story, with high ceilings, large high windows, large porch effects for shade, and surrounded by fine gardens. In Lima are two large charity hospitals. The older, the Hospital de Santa Ana for women and children, boys up to 10 years of age, has a capacity of 300 beds. A large new hospital is now being built to replace this old one, in which the government expects to install American nurses and American methods for caring for patients. One of the greatest innovations will be the introduction of wire screens against flies. Hospital Dos de Mayo for men was founded in commemoration of the victory over the Spanish fleet in Callao, May 2, 1866. The independence of Peru had, however, been declared in 1824. This hospital contains 700 beds and is more modern than the Santa Ana Hospital. Miss Soper, a trained nurse from London, has been working courageously for four years to develop a nurses' training school and to improve the nursing and hospital conditions generally. The results of her efforts are beginning to show.



CATHEDRAL AND PLAZA, LIMA

"Several cases of verrugas, a disease of the skin peculiar to Peru, were seen in one of the wards of this hospital. The disease is found in the higher Andes and is characterized by fever and eruption. The cause is unknown, although it is believed to be the bite of a night insect. Most patients recover, but there are fatal forms, when hæmorrhages occur under the skin, forming pustules.

"Both the Hospital de Santa Ana and the Hospital Dos de Mayo are maintained, as indeed are all municipal charities, from the public charity fund, which is accumulated by private contributions and public amusements.

"The Italians, of whom there are many in Peru, maintain a good hospital, and the French also have a very good hospital of forty beds. There are a number of private hospitals, notably Dr. Febrea's, which is quite modern in its appointments. Dr. Graña's hospital, with a capacity of 100 beds, now being built on the seashore about 3 miles from Lima, will be the last word in modern construction and equipment. American nurses and a nurses' training school will be installed. There are several excellent hospitals connected with American mines in Peru, with American physicians and nurses."

Dr. Watkins on the Hospitals

"THE hospitals are all of the one story type, and have gardens. The buildings, essentially, face the garden, and are entered from the garden. The private rooms are best described as stalls, one or two rooms deep, freely open to the garden, with no side window, but with a window in the ceiling.

"The hospitals are well equipped and clean. The nursing is sadly deficient as compared with our hospitals. They have no trained nurses. The condition of 'caste' prohibits members of the aristocracy from entering the profession of nursing. It would be disastrous, socially, and would subject them to the mortification and danger of being considered 'free property.' The other class lacks too much in education and culture for the work.

"We had the opportunity of witnessing one operation. The case was well worked up, including laboratory investigation. The clinical record would be a credit to any hospital. The case was a large hydatid cyst, filling the abdominal cavity. The room and operative technique were good."

HONORARY FELLOWSHIPS

HONORARY Fellowships in the Sociedad de Cirugía del Perú were conferred upon Dr. Mayo and myself in 1920 under interesting auspices. The ceremony occurred in the main lecture room or amphitheater of the Medical Department of the University of San Marcos.

We assembled in the main lecture room, on the large platform of which were the members of the Sociedad de Cirugía and of the Faculty of Medicine of the university. The President, Dr. Juvenal Denegri, occupied a seat at the center table, with Dr. Mayo and myself at either side. Flanking us were the members of the Faculty and of the society. On the main floor or amphitheater were about two hundred students. The back of the amphitheater opened onto a court filled with tropical plants, palms, and flowers. This could be seen through an attractive colonnade which outlined the assembly hall. The students, a splendid group of young fellows, were in their places when we entered and filed onto the platform. They rose in a body and cheered and applauded for several minutes. It was a reception that was rather stirring, and warmed our hearts to the future medical profession of Peru.

The President read an address of welcome to the two candidates for Honorary Fellowship. In the meantime, we had



DR. JUVENAL DENEGRI

Professor of Otology, Rhinology and Laryngology
University of San Marcos, Lima

received copies of the English translation of the address. A second address was read by the Secretary of the association, Dr. Francisco Graña. The Honorary Fellowships were then separately conferred by the President, and engraved parchment certificates presented to us as evidence of this honor.

As Dr. Mayo rose to speak, he received an ovation from the Faculty and students that plainly deeply touched him. It was some time before he was allowed to express his pent-up feelings and to say to them how much we appreciated their great hospitality and especially the honor they had just conferred upon us. He then described the object of our visit to South America. My own talk was received with an enthusiasm that I was at a loss to understand. In responding, the most I could do was to congratulate everybody on something: the splendid body of students for being educated in the oldest university on the Western Hemisphere, in a medical school with a seven-year course; the Faculty for being privileged to teach in the university, with such an attractive student body; Dr. Mayo and myself for being so fortunate as to be privileged to visit this institution and to receive such a reception. The brief talk was suddenly terminated and was followed by the most enthusiastic applause, too much for the conventional and rather commonplace talk. It occurred to me that there was some compensation in being brief and in speaking in an unknown tongue. It transpired, however, that these were not the reasons. It seems there had been quite a partisan controversy in the medical department over the length of the course, viz., the seven-year requirement for a medical degree. This had been discussed pro and con with considerable feeling, the students being divided into two factions, one opposing the long course and the other upholding it. In congratulating them on the seven-year course, I had used the sign language, putting up seven fingers to emphasize my speech. Each of the two groups to the controversy interpreted my remarks as favoring its contentions; hence the outbreak. As a matter of fact, Dr. Mayo and I soon found that our talks when brief and least understood were most heartily received.

SEÑOR JAVIER PRADO*

IN 1920 and again in 1921 we were afforded the pleasure of visiting Señor Prado at his palatial home, with its private museum containing antiquities of the ancient Peruvians and

*We have just learned with great sadness through our friend, Dr. Guillermo Gastañeta, of the recent sudden death of Señor Prado.



LOS SEÑORS PRADO

of the Incas of the pre-Peruvian age. Señor Prado is a son of a distinguished Peruvian who was President of the Republic at the time of the last war between Peru and Chile. He has gathered one of the most complete collections of ancient Peruvian pottery now in existence. Many rooms of his home are filled with unusually beautiful cocobolo and mahogany carvings. His art gallery contains some of the finest works of Peruvian painters. He has collected from France and Italy excellent bronzes, marbles, miniatures, cameos, and fans. One of the sleeping rooms is a marvel with carved furniture and cabinets of native cocobolo and mahogany, while the polished floors are covered with some of the most perfect Vicuña rugs that we saw in South America. From the windows one viewed the patios, which are a particularly artistic feature of this palace which is situated in a country where tropical gardens of great beauty are seen everywhere. An interesting room is one which contains many busts and the family portraits, a number of which are likenesses of his illustrious father

in the gorgeous uniforms of his time with many decorations. Señor Prado is a most charming host, and he is extremely modest in exhibiting his treasures. One of the marvels of his collection is a room filled with the skulls of Inca chiefs, many of them having been distorted and reduced by a cunningly devised pressure apparatus used by these aborigines.

Following our visit, Dr. Ricardo Palma, who also has a remarkable collection of curios, presented to Dr. Mayo and me two Inca skulls, mementos that we shall prize forever as a reminder of our visit to Lima.

SEÑOR RICARDO PALMA

THE father of Dr. Palma, Señor Ricardo Palma (deceased), at one time President of the Peruvian Republic, was the author of the "Popular History of Peru," which unfortunately has not yet been translated from the Spanish into English. Señor Palma assembled the nucleus of the thousands



MONUMENT TO SEÑOR RICARDO PALMA



MOLLENDO, PERU

of volumes which make up the present public library in Lima, to replace the earlier library which was entirely destroyed during one of the recent wars.

Señor Palma was beloved by the people of Peru, and because of his great beneficent deeds, a monument was erected to his memory and unveiled on February 12, 1921, the day we arrived in Lima on our second trip.

Dr. Mayo's Comments on the Bullfight

"THE bullfight still flourishes in the old ring at Lima, built nearly 200 years ago, but it is not very popular and will soon be abolished. Several surgeons in Lima told me that they had never seen a bullfight. The bullfight has its points of interest to those interested in comparative anatomy, and it requires skill and courage. It is not, however, as exciting or as dangerous to the human participants as football, but, like our North American sports, it permits the multitude a great deal of vicarious exercise on the principle that it is much easier to allow someone else to undergo exertion than to take setting-up exercises themselves. There are no public lotteries or open gambling in Peru, but there is little attempt to control the liquor traffic."

MOLLENDO

NOTHING can be more restful or delightful after several stirring days on land than those immediately following on our comfortable ship. On this occasion the evening was clear, with a red half-moon slowly going down and the false and real Southern Cross shining forth from among unfamiliar constellations.

On the morning of the second day a peep from the window revealed land but a mile away, marking the coast along which we were sailing. Above the brown foothills coming down to the water's edge several higher peaks were visible, among them El Misti, a volcano nineteen thousand feet high, from the crater of which one could imagine that a little smoke issued.

About ten o'clock we approached the little port of Mollendo where we dropped anchor a half mile off shore. Soon from the shore came the usual flock of little crafts bringing to us a group of ship's helpers and taking ashore the few passengers who were leaving here to go into Bolivia. Mollendo nestles on the cliffs of the rocky coast, the surf dashing high on the rocks or curling away up on a slanting beach. The town contains a series of adobe and wood buildings on several terraces and does not appear attractive under the perpendicular sun, especially as not one green thing could be observed on the brilliant and sun-baked mountain side.



PERUVIAN COAST, SOUTH OF MOLLENDO



SEÑOR ARTURO ALESSANDRO
President of Chile

CHAPTER V

CHILE



LOOK at the map of Chile! Do you comprehend the immense possibilities of that narrow country when she carries out the plans which are now under contemplation and when her efficient people work out the dream of her engineers? Billions of tons of gold, silver, copper, and other minerals are buried in that bulwark of mountains on her eastern border. Between the mountain barrier and the Pacific Ocean lies the strip, about one hundred to three hundred miles in width, extending from the tropics on the north, through the Temperate Zone, and into the Frigid Zone on the south. The northern half of this country requires water to make its valley equal the productiveness of Southern California. The mountains near at hand will yield to the machinations of her engineers, and the gold and wealth will pour into her lap. The country requires power for manufacturing, fuel for lighting, and in the southern portion facilities for heating. Her engineers have only to tap the nearby, never exhaustible supply of water from the mountains to get an abundance of power, light, and heat, and that with the utmost economy. And this is what they are doing. We shall have to watch and wait but a short time until these Yankees of the southern continent will win our admiration and applause through their accomplishment of greater wonders than those already recorded.

Speaking of Chileans as the Yankees of South America, the Chileans, with their generous sense of humor, are already facetiously reversing the compliment by calling our complacent people the Chileans of North America.

A bird's-eye view of the conventional and rapid traveler encompasses certain high lights of interest, and in that alone he can gather food for months of pleasant contemplation. I have already dwelt upon the possibilities of its many undeveloped resources; but it is in its present condition that we

are most interested. The area of Chile is 292,590 square miles, and its population is approximately 3,500,000, which indicates that there are many sections which are scantily populated. It has two important cities that possess many points of interest to the North American traveler, and several seacoast towns of growing importance.

ARICA AND TACNA

ARICA, our first port in Chile, is guarded by the great Morro Rock, five hundred feet high. From this stronghold the Peruvian cavalry drove their horses over the sheer cliff into the sea and were dashed to pieces rather than surrender to the Chileans in the war of 1880.

Since that time the province has been under Chilean control, and it is toward this province that the eyes of the world are turning as the claims of the two countries are being urged upon diplomatic attention. Arica was originally the seat of the provincial government, but owing to its frequent earthquakes and tidal waves, it was deemed prudent to remove the official records to a safer and more stable location. Consequently the official residence of the Intendente is at Tacna, a beautiful oasis city thirty miles inland, at an altitude of



MORRO ROCK

eighteen hundred feet, and having a population of some ten thousand people.

Before reaching Arica, we had been informed through our American Consul, Mr. Cameron, that the Intendente, Mr. Edwards, presented his compliments and requested our presence at luncheon. The invitation included Dr. and Mrs. Mayo, and Dr. and Mrs. Martin. Upon arriving in port, we were met by Mr. Cameron, the American Consul; Mr. Elliot, the British Consul; and Dr. Romes Aravena of Arica, who guided us from the ship to the railway station. There we found the special coach of the Intendente awaiting us. It was a huge enclosed car with seating capacity for ten or twelve people, and standing room for as many more. It was mounted on a Ford auto with flanged wheels which traversed the railway across the desert. The journey between the two cities is one of great interest and fascination. Endless billows of sand stretch to the foothills of the deep red and purple mountains, and constantly changing mirages vary the landscape with deceptive pictures of unreal beauty.

At last, however, one comes upon reality. Masses of tropical green, flowers in profusion, tall waving palms, and among them the red roofs of a city which is Tacna. At the



TRAIN, ARICA TO TACNA



FLANGED FORD, ARICA TO TACNA

station we were welcomed by the Intendente and drove with him to his home, where we met his wife, four of his daughters, and his son, Fernando. One might search the world to find a more charming and hospitable family. Our luncheon was most appetizing and tempting, and abounded in delicious tropical vegetables and fruits. As the young ladies all spoke English fluently, youth and gaiety reigned.

Later we had excellent music and an hour in the beautiful garden. Then Mr. Elliot took us to inspect a new hospital of which he is justly proud, and then it was time for us to make our return trip.

Upon reaching Arica once more we were met by the Governor of that city and taken to his home, which faces the open square of the quaint town. From the balcony we watched the populace and listened to a concert given in our honor by an excellent band. The Chilean National Anthem and the Star Spangled Banner received the enthusiastic endorsement of the audience.

As twilight fell we returned to the ship and steamed southward once more after a never-to-be-forgotten day of pleasure and enchantment.

IQUIQUE

IQUIQUE, our next stop, a busy nitrate center with a population of about twenty thousand, was most interesting. A delegation of physicians, headed by Dr. J. E. Villalon Diaz, accompanied by the clerk of the port and Dr. Germán Aliago, met us on the ship and took us ashore for an inspection of the town.

Iquique is an important center and is the abiding place of many English, Spanish, and American people who are officials in the companies controlling the business interests in the interior. The hospital is a thoroughly up-to-date one with a capacity of five hundred beds. Dr. Mayo and I inspected it, saw several operations in progress, and admired the thorough organization in evidence, especially as applied to a complete system of records, and well-equipped laboratories.

There are several clubs of importance in Iquique, including an English Club, a Spanish Club, and a general City Club. We were entertained in one or two of these and were taken for a drive about this city in which the streets are sprinkled by salt water from the sea, which while allaying the dust succeeds in killing all vegetation. Several little parks formed



GRAPE ARBOR, GARDEN OF THE INTENDENTE, TACNA



AUTOMOBILE CLUB, ANTOFAGASTA

beautiful green oases. Our hosts entertained us royally, and our day with them will not soon be forgotten.

ANTOFAGASTA

IN 1920 we met several doctors of Antofagasta, among them Dr. W. F. Shaw, an American who is in charge of the hospital of the copper mines at Chuquicamata, and Dr. A. Arturo Pemjean. We were shown the clean city, which is the principal nitrate port of the world, inspected a hospital, and were entertained at luncheon in a large public garden.

At nine o'clock on the morning of February 18, 1921, Dr. Francis P. Corrigan, who had preceded me to South America, having visited Ecuador and Bolivia, boarded our ship at Antofagasta with Dr. Shaw. At ten o'clock we went ashore in their launch and inspected the four-hundred-bed hospital, which is a model of cleanliness and beauty. After driving about the city we went to the Antofagasta Automobile Club, where our American Express party was to have luncheon, and where we were to have about eight of our local friends whom we had met the previous year to luncheon with us.



PACIFIC OCEAN FROM AUTOMOBILE CLUB

Dr. Mayo on the Coast Hospitals

"THE port towns of Arica, Iquique and Antofagasta have hospitals, all of which we visited. We visited also a large military and civil hospital in Tacna, situated in a fruitful oasis near the Peruvian boundary. The hospitals of Chile are supported largely by the state. The hospitals at Iquique and Antofagasta are much larger and have better equipment than those at Arica and Tacna. They are under the direct charge of a progressive Catholic bishop and are managed by French and Italian Sisters. Each hospital has a training school for about forty nurses, drawn from the lower and poorly educated classes, who are really drudges for the sick rather than nurses, and a training school for about thirty midwives. The bulk of the patients in these hospitals are from the outlying nitrate (saltpeter) mines. The buildings are unscreened, and although flies are not usually numerous, they are uncomfortably evident in the medical wards. Water is scarce in this rainless region; it is piped from the mountains for long distances, and is expensive. Lack of trained nurses, lack of adequate water supply, and lack of screens are the weak features in an otherwise excellent hospital system, but these defects are being rapidly overcome. The



VALPARAISO HARBOR

great American mining corporations on the coast and inland, such as the Guggenheims, have their own hospitals. These corporation hospitals are screened and thoroughly equipped with American appliances, and have American physicians and trained nurses. Dr. W. F. Shaw, who has had twenty years' experience in the tropics, is in charge of the Guggenheim hospital."

VALPARAISO

EARLY in the morning of Sunday, February 20, 1921, we sailed into the Naples-like Bay of Valparaiso and saw in the distance a smoky haze over the city. As the sun cleared the mist and revealed the city in the curved indentation of the sea, it became apparent to us that something unusual was happening. We heard the booms of guns and shortly discerned the faint bray of bugles and the fainter tones of smaller musical instruments. We wondered if this was a welcome to the voyagers of the obscure SS. *Ebro* on which we were approaching. If so, it was a royal welcome, because with a nearer view we perceived that the terraces of the city were crowded with the people cheering and waving flags. However, we were soon disillusioned and made to realize that our ship was not the object of all of this attention,

for in the opening to the harbor stood a great black hulk which proved to be the Chilean monster war vessel, *La Torre*, that had just arrived from the shipyards of England. Close to it, flylike, were a multitude of smaller steamers, and around them still smaller launches and rowboats. The new battle-ship stood out majestically, its rigging and decks covered with men and officers at attention for the welcome of a proud nation.

Valparaiso occupies a position on the long coast line half way between the upper and the lower limits. It has a population of approximately 200,000. It is a cosmopolitan city, having among its inhabitants 5,000 Germans, 5,000 English, with Belgians, French, Austrians, Australians, and a few from a number of the other Latin-American countries. The United States and Canada are represented by a few hundred, and there is a sprinkling of Chinese and Japanese.

About four hundred years ago, in 1536, Juan de Saavedra, a Spanish officer, founded this settlement, and gave it the name of his birthplace in Spain. It passed through many vicissitudes, including several destructive earthquakes. Like



CHILEAN WAR VESSEL, LA TORRE

many of the other South American nations, a wave of independence spread over Chile, and the Spanish authorities were deposed in 1810; but it was not until 1818 that the country threw off the Spanish yoke and became a republic. Valparaiso became a flourishing city, but in 1906–7 it met the fate of San Francisco and Kingston, and was partially destroyed by earthquake and fire. It is now rebuilt, and shows but few signs of its disasters. Valparaiso lies in the southern continent in latitude similar to Buenos Aires, Cape Town, South Africa, and Sydney, Australia. It is directly south of New York, and the distance is 8,460 miles. It occupies a flat area around a symmetrical indentation of the sea, a bay nearly three miles in extent of coast line. Beyond the flat area arise steep hills, indented with ravines, and the beautiful city extends from the flat area around the bay on to the hills above, lending to the scene as one approaches the coast from the sea an impression much like that of the bay and city of Naples. The climate of this portion of Chile varies from near freezing in the winter to 85° F. in the summer.

In a bird's-eye view of this Chilean business center, one will be attracted by the steep, inclined tram-car ways which transport the population from the low town to the hills above; its splendid water supply; the naval academy with its view of the city and bay from its ideal location on the heights; the various well-equipped hospitals which will especially interest the physician; and its suburban resorts, like Viña del Mar, with its water sports and resident attractions.

Valparaiso, while a commercial city of importance, strikes one as an attractive place in which to live. It contains much beauty, its rugged hills and its white buildings forming an attractive contrast to the blue waters of its deep harbors, the green of its trees, and the wealth of color of the flowers in its patios and its boulevards.

A delegation of old friends boarded our ship early in the morning and told us of the program for our one day's stay in Valparaiso and then left us for a little time. At one o'clock they returned and with them, in full regalia for the festive occasion of greeting the new battle-ship, was Dr. Alberto Adriasola, the Surgeon-General of the Chilean Navy. It was good to look upon his handsome face again and grasp his friendly hand.

Soon we were tucked away on the Admiral's launch and wending our way to the battle-ship, *La Torre*, where under the chaperonage of the Surgeon-General and under the conduct of the Commander of the ship, we inspected it from its keel to the

conning tower. It was an inspiring sight to look down from the dizzy heights of the ship upon the hundreds of smaller craft that were there to give welcome, and off to the shoreline of the curved bay where appeared the terraced heights. The day had become more beautiful with sunshine and great fleecy clouds, and a temperature like our fresh June days of the north.



RACE TRACK, VIÑA DEL MAR

VIÑA DEL MAR—PRESIDENT ARTURO ALESSANDRO

WHEN we had fully enjoyed the great ship and had been the victims of the inevitable cameraman, we were taken ashore, and in automobiles drove through the suburbs of Valparaiso, passing along the stately avenues which were lined with handsome villas, the summer residences of the society of Chile, and on to the most wonderful of race courses at Viña del Mar. It was a gala day at the races as a Prince of Spain was occupying the President's box, close to which were our seats. The races were beginning, and disregarding tips we placed our bets, and with the luck of the inexperienced, won.

In the promenade we met Dr. Amunátegui of Santiago and other friends of the previous year. While walking with one of the charming señoras the band began to play and everyone



REAR ADMIRAL ALBERTO ADRIASOLA
Director of Naval Sanitation, Valparaiso

stood at attention. It was the national air; the President had arrived. Naturally we were desirous of seeing him, and the Señora said: "You shall meet him." She took us to him and introduced the members of our party, as he stood unostentatiously under a large tree. He seemed more pleased than bored, and attempted a few words in English. He, Arturo Alessandro, who at that time had been in office but a couple of months, was astonishing the old conservatives by his democratic ways. He insisted upon going about, apparently unattended, although the Señora said he was constantly under the surveillance of secret service men. From appearances, he might on this day have been any one of a thousand well-dressed, unofficial holiday citizens instead of the Chief Executive of a great nation.

We received an invitation to attend the ball which was being given that evening in honor of the Prince. This was very tempting as all of the society of Chile would be present; but we were obliged to reluctantly decline.

Back to the race course we wandered and watched with interest the great crowds of people as they surged about the track and the grandstand during the race. When it was finished, they rushed again to the promenade where champagne corks popped in the restaurants and gaiety was everywhere manifested by these Latin people.

Surgeon-General Alberto Adriasola

PRESENTLY our hosts drove us back toward the city, and after driving about its edge we entered upon a valley road, whence we climbed to the heights above the town and finally emerged at the entrance to an attractive villa which was situated on a terrace above the drive. We walked up the steep winding path, on either side of which were flowers, shrubs and tropical trees, to Admiral Adriasola's home. Here we met his charming family—his wife, daughters, sons, and son-in-law. Our greeting was such as we had learned to expect from these people of the south—so warm, so gracious, so friendly. This delightful family captivated us, and I have never known a father and a mother who seemed to have more to make them satisfied.

The view from the balcony of this home was most inspiring. Far below us lay a panorama of Valparaiso Bay with its mass of shipping. The entire fleets of the nations could anchor here within plain view. Indeed, only a week previous to our arrival our own Pacific Fleet was anchored in the Bay, and the charm-

ing señoritas pointed out to us where this or that favorite Yankee battleship had lain. They had sailed away within a fortnight, and who knows how many fair Chilean hearts were hidden in secret recesses of those ships?

After tea we took a last look from the upper balcony. The sun had fallen into the Pacific; a brilliant glow covered the sky and gradually faded; and as darkness came on a planet appeared, then a thousand twinkling lights, outlining the city below like sparkling jewels.

SURGEONS

OUR previous visit was responsible for our numerous friendships. At that time the first launch brought a distinguished group of men who had come to greet us, pay their respects, and take us to the dock. They were lined up and we were introduced to Dr. Edwyn P. Reed; Dr. Vincenti Dagnino, president of the medical society of Valparaiso; Dr. Gaston Lachaise, secretary of the society; Dr. R. de la Fuente, Dr. Alberto Adriasola, and Dr. Prain, of Valparaiso; Professor Caupolican Pardo Correa, Professor José Ducci, Dr. Luis Vargas, and Dr. Juan de Diaz, of Santiago. Our stay at this port was short, but we visited the town, and before taking our Trans-Andean train at noon we had refreshments at the Naval Club, with Surgeon-General Adriasola as our host. In ten days we returned to this city in the special Pullman that the government had furnished us and were literally carried away by the committee of surgeons which had greeted us on our arrival in port.

It was considered desirable to consult committees in the two large cities of Chile, and accordingly we met in conference with a selected group of surgeons in Valparaiso. We had already spent a pleasant forenoon with the members of this distinguished committee and looked forward to our conference with a great deal of pleasure. Our meeting was held, through the courtesy of Admiral Adriasola, in a beautiful garden set aside for the use while on shore of the "Marine de Chile." The occasion was quite formal and Dr. Alberto Adriasola, the chairman, read an address and modestly suggested a few names of surgeons whom they recommended for Fellowship in the College. Among those suggested were many men whom we had already met. Including his own name, these consisted of Dr. Guillermo Muenich, who, with Dr. Adriasola, had been recommended by the Santiago committee, Dr. Silvano Sepúlveda, Dr. Federico Engelbach, Dr. Roberto Montt,

Dr. Rudecindo de la Fuente, Dr. Juan Thierry, Dr. Miguel Manriquez, Dr. Ernesto Iturrieta, Dr. Gaston Lachaise and Dr. Julio C. Zilleruelo.

There seems to be the most cordial co-operation between the surgeons of these two Chilean cities. The surgeons of this country, like the leading men everywhere in South America, are of the broadest type. Their European travel and their familiarity with several languages, gives them a breadth of vision that is frequently lacking in many of our surgeons who are provincial in spite of the bigness of their country.

At Viña del Mar, a suburb of Valparaiso, we were intercepted and conveyed in automobiles to a tropical garden where, in the shade of enormous trees, a wonderful banquet table was spread. A large oval canopy was stretched overhead, and in the background were the American, English, and Chilean flags. The entertainers were headed by Dr. Vincenti Dagnino, who made us a formal address which was responded to briefly by Dr. Mayo, Dr. Martin, Dr. Reed, Dr. Muenich, Dr. Avarosus, and Dr. Adriasola. Then our hospitable friends conducted us to our dock and by special launch took us to our ship.

Dr. Mayo on the Hospitals in Valparaiso

"VALPARAISO, a city of about 280,000, has a number of fine hospitals, built with the high ceilings, verandas and patios typical of the Spanish plan. There are separate hospitals for men and for women, and for children under 10 years of age. All the newer hospitals are built on the general type of the American hospital, with pavilions for men, women and children; the same operating rooms, laboratories, etc., are used for all. There are pavilions for private patients in which the rates, the cheapest of any in South America, range from $2.50 to $10 a day, gold. This includes ordinary nursing and medical care. No fee is charged for operations if they are performed by the surgeon who is paid by the year from the hospital fund. Other surgeons make their own arrangements with patients.

"The British and American residents maintain a hospital of about 100 beds. It is under the supervision of a British surgeon who, since he has no license to practice in Chile, employs a Chilean licensed physician to act ostensibly as chief. This subterfuge is employed also in some of the large mining hospitals. Needless to say, such arrangements are sources of irritation to the Chilean physician. A hospital is maintained by the German colonists located on a sightly spot on a hill.



DR. GREGORIO AMUNÁTEGUI

Professor of Clinical Surgery and Dean of the Faculty of Medicine, University of Chile, Santiago

The attending surgeon is Dr. Muenich, grandson of a German colonist, and one of the best surgeons in Chile.

"A schedule of operations performed in the hospitals in Valparaiso, February 13, 1920, is as follows:

German Hospital, Dr. Muenich:

8:00 a. m. Nephrectomy.

8:30 a. m. Intervention for cholecystitis for an old fistula between the gallbladder and small intestine.

11:00 a. m. Hernia.

11:30 a. m. Hæmorrhoids.

Hospital de San Agustin, Dr. Iturrieta:

9:30 a. m. Cancer of the uterus; cæsarean section for constriction of the pelvis.

8:15 a. m. Dr. Engelbach: Cholecystectomy for biliary lithiasis.

Hospital de San Juan de Dios, Dr. de la Fuenta:

Cholecystectomy."

SANTIAGO

IN 1920 Dr. Mayo and I visited Santiago, arriving in the city after midnight.

At nine o'clock the morning following our arrival, we were met at the Hotel Savoy in Santiago by a committee of local surgeons. Heading the delegation were Professor Gregorio Amunátegui, Dr. José Ducci, secretary of the Faculty of Medicine, Dr. Pardo Correa, Dr. Victor Koerner, Dr. Francisco Navarro, and Dr. Jerman Valenzuela. We were whisked off to an inspection of hospitals and medical schools and ended up at the home of Professor Amunátegui for a luncheon which was given by himself and his wife for our ladies and a number of medical men, including also our Ambassador, Mr. Joseph H. Shea. This was another enjoyable luncheon of the formal type that was made unusually pleasant by its family character. Dr. Gregorio Amunátegui is of the cultured type of Spanish gentleman and wins one's heart by his genial hospitality and his genuine cordiality. In the evening the members of the Faculty of Medicine and their wives gave a large dinner for us in the restaurant on the famous island mountain, Cerro de Santa Lucia. This was a fitting finish for our official visit to this capital.

EARLY in the morning of February 21, 1921, we bade adieu to our good ship *Ebro* at Valparaiso and boarded a train for our second visit to Santiago, the first arm of our trip

over the Andes. The green of the fields and the colors of the flowers were heightened by a heavy dew. Our gradual climb through the valleys of the foot-hills of the mountains of this narrow country was an ever interesting panorama of hamlets, fields of corn, alfalfa, wheat and oats, and extensive pastures on which well fed cattle and horses were grazing. On the terraces of the hills and on the slopes were many varieties of fruits—mangoes, melons, nectarines, peaches, oranges, lemons, pineapples, pears, alligator pears, plums, apricots, and luscious grapes. We followed the beds of rivers and smaller streams which in March are not over-full. Our train skirted hillsides and gave us an everchanging view of the valleys and glimpses of the second range of hills, with the real mountains beyond, and an occasional view of snow-capped premiers still farther east. At the hamlets the natives, many of them half-breeds, were displaying their wares—fruits, bread, and cakes of all descriptions. Along the road-side were adobe or bamboo huts often thatched with palm leaves, and in the open spaces about the huts congregated innumerable children and dogs.

By many meanderings we passed over one range of hills and finally dropped into the valley that holds, like a gem on a Princess' bosom, the capital city of Chile—Santiago. We recognized it by the island-like mountain, Santa Lucia, a



OXEN ON DOCK AT ANTOFAGASTA

sentinel in brilliant uniform which, with distinction and dignity, stands guard in the center of the city.

While in March one can view at leisure natural and artificial beauties of this Capital, the society and important professional and business inhabitants are away in the mountains or at the seaside. We enjoyed the beauties of nature and visited the interesting places of this Latin city, drank in the pure, dry air of its valleys, and were inspired by its mountain sentinels that have guarded the valley through the ages.

We have already spoken of our reception at Valparaiso and of our entertainment by the surgeons of Santiago. We found a genuine desire on the part of our committee of surgeons here to co-operate and to become affiliated in the work of the American College of Surgeons. We could not have had a more influential chairman than Dr. Gregorio Amunátegui, and in our formal meeting we had the services of Dr. W. E. Coutts as interpreter, although nearly all of the Chileans understand some English. Besides the chairman, the following surgeons were discussed and recommended for our consideration: Dr. David Benavente, Dr. Marcos Donoso, Dr. Eujenio Diaz Lira, Dr. Carlos Charlin, Dr. Victor Koerner, Dr. Eduardo Moore, Dr. Alejandro Mujica, Dr. Francisco Navarro, Dr. Caupolican Pardo Correa, Dr. Emilio Petit, Dr. Alejandro del Rio,



CERRO DE SANTA LUCIA



SANTIAGO FROM CERRO DE SANTA LUCIA

Dr. Lucas Sierra, Dr. Jerman Valenzuela, Dr. S. Luis Vargas, Dr. Jerónimo Alvarado Wall, Dr. Silvano Sepúlveda, Dr. Alberto Adriasola, Dr. Luis Abalos, Dr. Guillermo Muenich, and Dr. Alberto Zuinga.

THE ROMANCE OF A DENTAL COLLEGE

AN interesting diversion was a visit to La Escuela Dental, the dental department of the University of Chile, at Santiago. The Dean, Dr. Jerman Valenzuela, was our host and conducted us through a superbly equipped dental school. This institution has accommodations for three hundred students. Each student has a complete equipment, including a dental chair, instrument cabinets, instruments, supplies, and a laboratory for conducting a scientific clinic in dentistry. The building covers an entire block and is two stories in height. It is comparatively new, and splendid architecturally.

Attached to the founding of this department of the university is an interesting romance which involves the supposed murder of a German Consul; the burning of the legation; the mysterious disappearance of the janitor of the building, and of a large sum of money belonging to the Consul's country which had been taken from the safe. A search among the ruins revealed the

body of a man, much disfigured, on which were found the shirt-studs, cuff-buttons, and other personal effects of the Consul. The Chilean Government was much humiliated by the atrocious murder, and proceeded to make amends for the tragedy in every possible way. The official received a magnificent burial, and the state vied with the municipality in doing honor befitting the station of the deceased and the country which he represented. During the inquest, Dr. Valenzuela, the dentist, requested the privilege of examining the jaw and teeth. He made careful notes of his findings. He discovered that the murdered man had splendid teeth without fillings or defects, and that one wisdom tooth was missing. He then consulted the wife of the Consul and learned that her husband had had defective teeth and had been the subject of considerable dental repair. The wife of the janitor stated that her husband had had perfect teeth and had consulted a dentist on but one occasion, when he had had a tooth extracted. This information, which confirmed Dr. Valenzuela's suspicion, was communicated to the proper authorities. The investigation that followed led to the capture of the official who had become snow-bound in the Andes in his attempt to escape with his bags of gold. He was brought back to Santiago, tried for the murder of the janitor and treachery to his government, and finally executed. In the meantime, the janitor had received a state funeral. He had been buried with great honor, and his remains placed in a mausoleum, as befitted the rank of an honored official of a great nation. The clearing of the mystery had relieved the Chilean government of serious humiliation and embarrassment.

Attention naturally turned to the unostentatious man who, by careful observation, had been instrumental in clearing up the international disgrace. What could the government do for him? He asked nothing for himself, but suggested that he had long possessed an ambition to build a model dental college for Chile. The Chilean government asked him to present his plans, and the final result was the establishment of the thoroughly equipped institution that we visited. We received a hearty welcome from this "Sherlock Holmes," Dr. Jerman Valenzuela, the Dean of LaEscuela Dental, who has every reason to be proud of his ideal institution.

A DEMONSTRATION OF EFFICIENCY

THE pace for many days had been a fast one. On leaving the dental clinic in Santiago, Dr. Mayo, who is always considerate of his associates, intimated that I was looking rather

peaked and suggested that I return to the hotel for a little rest, as our afternoon was to be a strenuous one. This, to me, was an acceptable suggestion. The officials accompanying us suggested that they utilize my incapacity to give us a demonstration of their municipal service. The city has developed a personal service organization. Any individual in distress may, in case of injury or sudden illness, call for aid from any public telephone. An immediate response is accorded in the form of an auto-ambulance with a medical attendant. We were fully two miles from the hotel. I enthusiastically consented to become the victim for the experiment. A telephone call was made, and we were asked to time the response. In less than five minutes, considerable commotion was evident in the narrow street, and with a rush an attractive, clean ambulance landed at the curb. A white-coated official conducted me to the coach and placed me upon the couch. The ambulance turned and, working continuously a three-noted siren that could be heard for blocks and which all traffic is bound to respect, started for the hotel and arrived within the prescribed time—five minutes. It was a wild ride, because it was an official demonstration, and the importance of time on this occasion seemed to be thoroughly appreciated by the attendants. However, we reached our destination without killing or maiming any people or dogs, and without catapulting any cathedrals or corner drug-stores.

The Chileans are a progressive and efficient nation, and this is obvious to the casual visitor. The Chilean Government, Army, Navy, and Municipalities all reveal thorough organization, thrift, and administrative ability of the highest order. The little demonstration referred to above was a practical illustration of their attention to detail.

Dr. Mayo's Observations on Chile

"SANTIAGO, the capital and largest city of Chile, is situated at an elevation of 2,000 feet on the river Mapacho in a valley surrounded by snow-capped mountains. The site of the city is unusually beautiful, and, unlike the cities farther north in Chile and Peru, it is blessed with rain. The city government is progressive and excellent. All things considered, Santiago may be said to be the most beautiful residential city on the west coast, if not in South America.

"The hospitals in Santiago are very good. The old ones are being remodeled along American lines. The surgeons are doing excellent work. Professor Lucas Sierra, well known in America, was abroad preparing plans for greater hospital



ART GALLERY, SANTIAGO

extension. His colleague, Dr. Amunátegui, dean of the medical school, and one of the foremost surgical teachers of South America, was in the city, but expected to leave shortly to join Dr. Sierra on his mission.

"The Public Assistance Association in Santiago should be mentioned especially. It is supported by the state and municipal governments, and is under the control of the faculty of the medical school. The association has its own hospital, in which all emergency surgery is done. Ambulance stations are located in different parts of the city, centering in one hospital which is in direct communication with the criminal courts. All postmortem examinations are conducted under the medical jurisprudence department of the medical school, in marked contrast to the inefficient coroner system in the United States. All cases of stabbing, shooting and accidental injury pass through the hospital, and the student derives the benefit of all medical and legal examinations. The uneducated native Chilean settles his disputes with the knife and inflicts ghastly wounds, which make the razor slashes of our nonvoting voters south of the Mason and Dixon line appear trivial in comparison. I was told by a Chilean surgeon that when the Roto takes out his knife, all South America squeals and runs. Any one seeing some of the injuries he inflicts would certainly be inclined to lead in the running.



DR. LUCAS SIERRA

Professor of Clinical Surgery
University of Chile, Santiago

"The ambulance service is quite remarkable. This was demonstrated by a call from the Institution of Physical Culture and Therapeutics to one of the most distant stations in the crowded part of the city. The dean stepped to the telephone, put in the call for public assistance, and shortly a peculiar, high-pitched horn was heard in the distance. All traffic stopped at once, and in two minutes and forty seconds an ambulance with two physicians and a nurse in attendance was at the door. Temporary assistance may be had on telephone call day or night by any person, rich or poor, who is sick or in trouble.

"There is but one medical school in Chile, and that is in Santiago. The school compares favorably with medical schools in other countries. Opportunities for English and American physicians in Chile are not alluring. Examinations to qualify for practice are given in Spanish; they are highly technical, and are given under conditions that have not been surmounted by any American physician in recent years. When it is taken into consideration that the school in Santiago has a seven-year course and one thousand students, of whom only about thirty-five of the senior class succeed in graduating each year, the natural handicap is easily seen. Some of the students who eventually graduate spend eight, nine, or even ten years in preparation for the final degree. A fine hospital of seven hundred beds is directly associated with the medical school. The buildings for both institutions are spacious, dignified and well equipped, and are situated on a large, beautiful tract in the heart of the city. We attended a number of interesting surgical clinics and demonstrations. Professor Noe, who was trained in Italy, showed us some very beautiful specimens of *Ancylostoma duodenale*, with microscopic slides. This disease was first found in men working in the Simplon tunnel in Switzerland and is endemic in certain mines in Chile. We were interested also in the treatment of anthrax by Lugol's solution, which appeared to be extraordinarily efficient.

"In the latter part of the nine crowded years of Pizarro's life, he started two expeditions south of Peru, into the country called Chile. The first expedition was beaten back by the valorous Araucanian Indians. The second met somewhat better success, but the Indians were not conquered. Eventually, after more than one hundred years of ruthless warfare, an armistice was arranged which ended in an alliance. It was these brave Araucanians who gave the native strain to the Chileans, the most militant people of South America.

"The troops in Chile are German trained. Before the Great War the uniforms, helmets and general equipment

were German, but they have been changed to English designs. The cavalry horses are beautiful and well trained. In the navy the training and equipment have always been British.

"The long-standing boundary dispute between Chile, Peru, and Bolivia is a source of friction, and a peaceful Pan-America depends on its settlement. There are from four to five million Chileans on 2,700 miles of Pacific coast, an approximate distance of as far as from Alaska to a point opposite Mexico



CERRO DE SAN CRISTOBAL, SANTIAGO

City. Undoubtedly the Chileans feel cramped on this narrow strip of land, a little less than 300,000 square miles, and it is only human that they should look with appraising eyes on the great countries of Bolivia and Peru. The Chilean military attitude is the index to his characteristics, that is, efficiency and self-reliance.

"Chile has the finest railroad system in South America, both for military and for civil purposes; American equipment, with Pullman cars, etc., are used. There are no lotteries or open gambling in Chile, and a strong prohibition party exists, with evidences of control of the liquor traffic.

"The Chilean people are independent and self-reliant. They are imbued with the American spirit of progress and efficient

organization. At a banquet one night, wishing to honor the Chileans, I said, 'Chileans are the Yankees of South America!' There was no applause and I did not repeat the offense.

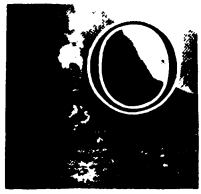
"Our reception in Chile was very cordial, and everything possible was done by both the government and the medical profession to give us information and opportunities to examine their educational institutions, hospitals and clinics. The medical profession in Chile stands very high in the estimation of the people, and may be said to be the most influential of the professions. The leading medical men have taken post-graduate courses abroad, and many of them are graduates of the best continental schools. The surgeons of Chile are a splendid body of men, and it was a great pleasure to see their work and to study their methods."



THE ANDES

CHAPTER VI

THE ANDES



UR train from Santiago to Los Andes followed a mountain stream and climbed into the foot-hills which constantly became more and more rugged, until we finally faced the backbone of the Southern continent, the Andes! The trip from the coast at Valparaiso to the coast at Buenos Aires is made in three stretches, the first from the coast or Santiago to Los Andes, Chile, a small city well up in the foothills of the western edge of the real Andean mountains; the second a fourteen-hour daylight trip from Los Andes over the Andes by a narrow-gauge cog railroad to Mendoza on the Argentine side; and the third a twenty-two hour trip from Mendoza to Buenos Aires on a broad-gauge train with sleeping and dining cars attached. Los Andes is an attractive city with much green foliage, water running through the streets, and clean pavements of cobble-stones. A plaza or park, with a promenade and a band-stand, occupies a central location, and here all the citizens congregate, some of them well dressed and refined in appearance, others the peasants, many of them half-breeds in picturesque, highly colored costumes.

The hotel at Los Andes which has clean, cubby-hole rooms, is built about a concrete-floored patio in which elaborate meals are served out of doors.

THE CHILEAN ANDES

AS the time would be too short for this daylight trip over the Andes if one started late in the morning, it is begun from either Mendoza on the Argentine side or from Los Andes on the Chilean side at six o'clock in the morning. The narrow-gauge train of three passenger coaches and a well-stocked commissary car awaited us in the court-yard of our hotel. It was a cheerful if a sleepy group that climbed aboard, all full of anticipation



SALTO DEL SOLDADO (SOLDIER'S LEAP), CHILEAN ANDES

for the great scenic experience of their lives. The little train, business-like, began its upward journey. A raging stream from the mountains dashed impatiently about the great boulders, the ambitious waters throwing spray which in the sunlight made innumerable rainbows. At this level a wealth of low-hanging willow trees bordered the banks of the river, and in the fields and on the mountain sides were trees bearing bananas, oranges, and many strange, unknown fruits. Almost immediately we were in the midst of rugged, rocky peaks, the bases of which were green but the tops bare and sharp. The train plunged through tunnels, traversed shelves of rock, crossed valleys, only to find another shelf or another valley beyond; but constantly reached higher levels. Shortly many snow-capped peaks came into view, and in recesses of the mountains where the sun rarely penetrated were piles of snow and miniature glaciers. Only a foolish and ambitious writer would attempt to describe a mountain scene; and it is an ambitious traveler who after one or two trips can remember the varied details of a ride over the Andes; and photographs are but a meager reminder and an aggravation.

After struggling through a labyrinth of smaller but impressive mountains, traversing smaller valleys, and following many rushing rivers (any one of which if properly harnessed would

furnish power to operate the whole Andean system of railroads), the little train emerged in a wide, placid valley in which is located a little hamlet through which a flat river winds its way. The whole valley might be located in New England, its surface is so undramatic. On a pile of lumber sat an American woman caring for her child, an attractive little tow-head who was playing with improvised toys. The husband and father was undoubtedly an American engineer who busied himself in an attempt to find a way of transforming the unlimited riches of the Andes into American dollars.

But the beautiful valley lying in the sunshine is but a resting place for nature before she shows the sightseer what she really can do to astonish him. Some one called attention to the giant mountains ahead, to the great fields of snow that spread down to our very feet, to one opening and still another a half mile above us. Between these openings which penetrated the heights we could see the little shelf dug out on the mountain side, and were reminded that that was where we were going. Still farther above us, near the clouds, was another shelf constituting one more great switchback to guide our frail train to still higher levels. Within a half hour we were looking down



MENDOZA RIVER



INCA LAKE

from the first shelf to the placid valley where the little child was still playing, and within an hour we were gazing back from the upper shelf, from where we could see the trail, a zig-zag little ribbon of bareness worn out of the eternal rocks representing the trail of the traveler in the older days before the railroad was constructed. All about us were the giant mountains, and while we were nearly two miles above the sea level, they still towered above us in their majesty. At this height we emerged into another valley in which, between the peaks, as if in the palm of the Creator, was the beautiful Inca Lake, five miles long and three miles wide, surrounded by masses of broken rock that some volcanic convulsion had tossed into the breach. We climbed from our train to get a nearer view of this distinguished body of water with the blueness of the Monday rinse, and drank in its beauty and its solitude. Climbing still higher, we finally reached a little barracks and the customs house that marks the border of Chile. Here we entered the tunnel that connects Chile with Argentina.

THIS tunnel through which we passed is one of the great engineering wonders of the world. It is two miles in length, and has the distinction of being at as great a height as it is long. In its construction the estimate and actual chainage were practically identical, while the floor levels from the two sides met almost exactly. On the Argentine side were the customs house officials of that country, and as we alighted some one pointed to a depression between two heights under which we had tunnelled where stands the Christus, a gigantic statue erected by Chile and Argentina as a symbol of perpetual peace.

As we began the descent on the Argentine side, we saw beside the road-bed a little stream two feet wide, the head waters of the Mendoza River which at its mouth is a mile in width.

Soon after crossing the summit the train creaked to a stop. "All out to see the premier peak of the North and South American continents." We were now among the elect. All



ACONCAGUA

around us was a group of great ones. As is true in looking upon a group of distinguished men, it was difficult in such an assembly to pick the most distinguished. Mount Aconcagua, a long, low, range-like monster covered with snow, forty miles away, does not stand up in so satisfying a way as does Shasta, which although only one-half its height has the advantage of being a great mountain among small ones. Aconcagua is a giant among giants.

PUENTA DEL INCA

A FEW miles farther on we disembarked at Puenta del Inca, an Argentine mountain resort frequented by the society of Mendoza and Buenos Aires. An attractive hotel occupies a space above the little valley, and all about it tower the mighty peaks of the Andes. Close to the hotel is an interesting natural bridge which spans a boiling river, and there are hot and mineral springs which are utilized as medicinal baths. The walk from the station to the hotel in the altitude leaves one breathless, but if of a strong heart, keen for the good things of the table which are served at the hotel.

Having satisfied the inner man we began our descent and followed the little stream that was growing lustily into a rushing torrent. We remembered that last year, at one point, the end of a passenger coach was protruding from its turmoil, demonstrating the insecurity of our shelf on the mountain side, especially as above us in an almost perpendicular line were granite walls, ready to send down an avalanche of rock which would carry with it the trivial work of man. In contemplating the wonders of this trip, one has great difficulty in deciding whether to admire more the work of nature or the work of man. In many places and at many times one may see duplicates of this great scene; but I doubt if there is a place on earth where for fifteen consecutive hours one may traverse a mountain range and see the constant development of marvellous scenes like those of the Andes, with the premier peak of a continent almost constantly in view as a basis for comparison.

In the afternoon sun the bare cliffs on the eastern descent present not only the usual grandeur but a symphony of startling color—deep reds, deep and pale greens, deep and pale purples, and yellows in a riot of shades, while above is the blue sky with great fleecy clouds caressing ambitious peaks. As the twilight falls, with the sun apparently setting many



PUENTA DEL INCA, ARGENTINA

times as the little train curves about among the mountains, one is awed into silent contemplation by the wonder of it all. Finally darkness descends and the stars and planets seem near enough to touch.

The year before, as we approached Mendoza, we looked up from one of the deep valleys through which we were passing and there in the distance, in the light of a full moon, not disappointingly as in the noonday, stood, boldly and in great majesty, Mount Aconcagua with a panoply of glistening snow and ice. It was a fitting climax for the last scene of a great drama. Night rolled down the curtain, and we sped into the city.

IN traveling this route in 1920, Mrs. Martin wrote the following to some of her friends:

"Los Andes—Tuesday, February second: General call at 5:00 o'clock; breakfast at 5:30; and train at '6:20, not 6:21.' Exactly on time, we started over the narrow gauge road which winds up and through the mountains. For the first hour our way lay via Rio Blanco, and repeated the journey of Monday. I was very glad to have seen it before, as it is not nearly so lovely in the morning as when seen at sunset—a theory I have

always maintained as opposed to that supercilious 'early bird.' However, on this trip there was much of interest, as the people were all flocking to work and in some places thrashing was already in active operation. This is a most primitive procedure. The grain is spread on a hard, earth floor; four or five horses harnessed abreast are driven furiously round and round over it, suddenly stopped, reversed, and the process repeated until the grain is trodden out. It all seems very curious when scarcely a stone's throw away a stream is just tearing its way by and furnishing no end of power. We found later that there had been very warm weather which had melted the mountain snow rapidly and changed placid, indolent streams into raging torrents. That is probably the case here.

"Did I tell you about the houses along the way? They, too, are most primitive, sometimes of bamboo with straw roofs, and sometimes mud huts or adobe, but almost universally surrounded by lovely flowers, and flowering hedges. Often we saw open-air ovens with some sort of a roof protecting them, and we were uncertain whether they are intended for the family bake or for some process of coke-burning.

"As we climbed into the mountains, they became more and more austere with quite a bit of snow here and there. Soon after leaving Rio Blanco, a cog road is employed which jiggles one slowly along at an almost perpendicular climb. All in all, it was a wonderful morning, with constantly changing peaks coming into view, and an ever new panorama unrolling itself before us. Someway, in our mountains at home one seems to see one particular mountain for a long time, and then another; but here it is just a series of one great mass overtopping its neighbor and stretching on and on indefinitely.

"About noon we reached the summit and neared the boundary of Chile and Argentina. Just at this point the train slips into one of the greatest tunnels of the world. It is 10,384 feet long and 10,778 feet above sea level. That is '1,500 feet higher than the Stelvio Pass carriage road, and 3,500 feet higher than Mont Cenis, Saint Gothard, and the Simplon Tunnel. When this tunnel was built, the calculations were so exact that at the junction there was practically no difference in the levels, and the chainage was almost exactly as estimated.'

"At the boundary of Chile and Argentina a huge and impressive bronze Christus has been erected to symbolize the enduring friendliness of the two countries. It was suggested by Bishop Benavente, cast from the bronze of an old Argentine cannon, and paid for by money solicited by the women of Argentina, under the leadership of Señora de Costa. It was



ROAD IN THE ARGENTINE ANDES

placed at the highest possible spot in the boundary mountains, and bears the inscription: 'Sooner shall these mountains crumble into dust than Argentines and Chileans break the peace to which they have pledged themselves at the feet of Christ the Redeemer.'

"From the little station of Las Cuevas we could see nothing of the real statue; but we eagerly strained our eyes toward a dark patch in the snow some three thousand feet above us and drew what satisfaction we could from our distant view. As we came into the Argentine, the character of the mountains seemed to change, and they became more friendly and placid, with gentle slopes and here and there patches of bright yellow flowers.

"A few minutes before reaching Puenta del Inca, our train stopped and there in an opening in the mountains towered before us majestic Aconcagua, the highest peak of the Western Hemisphere, 6,858 meters, or about 22,800 feet. Although it was fifteen miles away, its snowy head glittered in the brilliant

sunlight, and its silent grandeur touched with awe even the distant observer.

"At Puenta del Inca a wonderful natural bridge, medicinal springs, and a good hotel combine to make a popular resort. When the train stopped, I got out and, climbing into a waiting carryall, was whisked away to the nearby hotel. The wisdom of my action was demonstrated when Dr. Mayo and Franklin came puffing up, well winded by the heat and the altitude. At the entrance to the hotel we were greeted with shouts and



TUNNEL IN THE ANDES

cheers from the assembled guests, and found the stars and stripes and the blue and white of the Argentine side by side in the decoration of the building. The band played for us and everywhere the greatest enthusiasm and excitement were manifest. The luncheon was excellent, and well served. As usual, there were many courses and a variety of wines. As soon as it was over we were escorted back to our train by the entire community, and wildly bidden God-speed in a chorus of friendly 'Adios.'

"Then began one of the most wonderful experiences of my life as hour after hour the most majestic, multi-colored mountains crept by us. Not a tree, not a shrub, just masses and masses of rock piled on each other, tier upon tier, and of such marvelous color, now pink, now yellow, now deep red, with here and there splashes of green, gray or blue—all glowing and quivering under the warm afternoon sun.

"Whenever the stream, which is now the Mendoza River, was seen—and that was almost constantly, as we followed its bed—the water was tearing along like mad and we began to see traces of the slides and washout which had detained us. At one place we passed the spot where a train, carrying only its crew, left the track and pitched into the water below, where we could still see the cars lying bottom side up. It is a mystery that this road can ever be kept open at all. Much of the way the track is a mere thread on the side of a mountain whose structure is such that it seems as though the slightest jar might precipitate an avalanche; just loose stones held insecurely together by soft dust and sand; then will come great masses of rock, looking as though only the eternities would dislodge them; and so it goes, constant variation.

"Owing to the serious difficulties on the road, our train crept along more and more slowly and we lost more and more time. The sun went down, the moon came up, the mountains loomed dark and threatening and the river tore along alarmingly swift and near. Finally, at about ten o'clock, we neared Cacheuta, which is celebrated for its medicinal baths. By digging only two or three feet below the earth surface, water gushes forth containing various medicinal properties and varying in temperature from seventy-nine to one hundred and twelve degrees. The little town prides itself on its quite pretentious hotel, and as many as 20,000 guests per annum visit the resort. But here, less than a week ago, occurred a bad slide which carried the road and a portion of the hotel into the river, and at which time several of the guests were drowned. Now, in spite of desperate efforts, the road had not been sufficiently repaired to make it safe for passengers; so we all disembarked, leaving our worldly goods in the cars which were pushed over a rickety bridge, while we followed on foot, single file. It was rather a thrilling sensation to stand out in the open near this little South American town—the stillness of the night, the mountains all about us, the Southern Cross shining over our heads, the moonlight falling on the glistening snow of Aconcagua towering in the distance, all combined to paint a never-to-be-forgotten picture.

"Presently we climbed once more into our train and crept on our way, always hugging the river which at times seemed only a foot or two from the tracks, and which, in places, was we were told, forty-five kilometers deep. It was midnight when we finally pulled into Mendoza, and bag and baggage left the Trans-Andean Railroad and transferred ourselves to the sleeping cars waiting for us on the Buenos Aires and Pacific road.

This is a wide gauge road and runs some three hundred and fifty miles or more in an absolutely straight line, the longest straight track on record. Somewhere there is an 'S' in the road, and then it goes on straight again for considerably over two hundred miles. Two fine dining cars, attached to our train, were ready for action upon our arrival, but most of us preferred our sleepers, finding from five thirty a. m. to twelve thirty a. m. quite long enough for one day.

"The sleepers were of the continental type, and not uncomfortable. Each room was equipped with a washbasin, electric lights, and an electric fan. The space between the berths and the wall was not more than two feet, and was the only available place for bags; consequently, there was practically no standing room.

"The trip across the plains is reputed to be indescribably dusty and hot, but the recent torrential rains had left this



FORK STREAM, THE ANDES

region still moist and moderately cool, for which we were devoutly thankful. The country is very flat, somewhat resembling vast stretches of our own western prairies. Sometimes it is barren, with great bunches of pampas grass nodding at one; sometimes there are immense corn and wheat fields; and over and over again we saw herds and herds of cattle—beef enough for the world. There are few villages, and still fewer farm houses, but this may not be remarkable, as the population of all Argentina only averages six to the square mile. All day we rode over this rather monotonous country and grew hot and tired, but never downhearted, there was so much to see and enjoy.

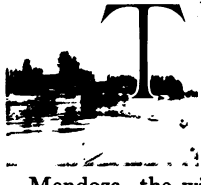
"We had been told that we might expect to reach Buenos Aires at about ten o'clock; but by good fortune we made up two hours and arrived at eight. Quite a committee of surgeons, headed by Dr. Vegas and Dr. Pasman, met us, then after submitting to the operations of the omnipresent photographers, we were put into Dr. Vegas' car and driven to the Plaza Hotel. This is a very modern, very up-to-date establishment, where delightful rooms were awaiting us and where we were only too glad to sink down and rest."



SEÑOR HIPOLITO IRIGOYEN
President of Argentina

CHAPTER VII

ARGENTINA



TIRED and hungry, we transferred to a broad-gauge, solid train of the continental type which consisted of comfortable compartment sleepers and two well-stocked diners. The linen was clean, the waiters keen, and the food delicious and welcome to a group of tired people who, each in his own way, had "taken in" the Andes.

Mendoza, the wine center of Argentina, its fields for miles filled with growing vines loaded with purple fruit, is a well-lighted, modern city. Its altitude makes its climate attractive for the people of Argentina during the hot months of the year. Although unusual for this season, a terrific rain had fallen for twelve hours, and had, they told us, extended east over the normally dusty pampas. Water stood in the low places of the streets, rushed through the irrigating ditches, and everywhere was delicious freshness. This presupposed a peaceful sleep, with fresh air filtered of all dust.

THE PAMPAS

WHEN we awoke in the morning, our train was passing quietly over the flat plains. The roads were wet, and large fields covered with water stretched in every direction. While eating our breakfast we could see from the window myriads of wild fowl. At several places great flocks of flamingoes flew away and circled back to light again upon the water after the train had passed. These creatures, as large as swans and graceful in outline, with a wing spread of from three to four feet, are of the most beautiful scarlet, and as they leave the water and fly in flocks one can only liken them to great flames of fire.

The pampas are endless, and for hundreds of miles they are as flat as a billiard table. They produce everything that will

grow in Nebraska, Kansas, or Iowa. The pampas grass, tall and graceful with its plume of white, is everywhere noticeable. There are miles and miles of grazing lands, with thousands of cattle, sheep and horses. Occasionally we saw flocks of ostriches which like colts in a Wisconsin field ran away in mock fright as the train appeared, displaying a wealth of fluffy feathers that would make a Fifth Avenue milliner turn green with envy.

There are not many towns, and few comfortable farm houses. The land is owned by non-residents, and the tenants evidently have neither the inclination nor the authority to demand the comforts that are enjoyed by the farmers of our own western and central states. At any rate, it so appears to the casual traveler. Country roads which might attract the automobile tourist have not yet been constructed in Argentina.

BUENOS AIRES

NO matter where or in what manner one has traveled, he must be agreeably surprised by the charm and beauty of the metropolis of South America—a cosmopolitan city, possessing beautiful boulevards, parks, palatial buildings, continental theaters, museums, libraries, art galleries, universities, clubs, and beautiful suburbs in which resides its



AVENIDA DE MAYO AND THE CAPITOL

summer population; but beyond this it has an intangible fascination that one cannot describe; that holds one in thralldom as do some of the famous capitals of Europe.

This city, although founded in about 1530, was not permanently settled until the latter part of the sixteenth century. Its population is now more than a million and a half, and it is so situated that there is ample room for expansion. Its people are independent and proud, and they have a charming manner and a friendliness that makes one admire them, warm to them, and that creates a desire to live among them and to absorb their spirit. While they are a serious people, they possess the desire for pleasure and social intercourse, as testified by their clubs, their pleasure parks, their race tracks, their theaters, and their opera houses. They are scrupulous in the care of their people, as is evidenced by their system of hospitals, which are not excelled by those of any city of the world; also in their educational system, including the early care of their children, their later, higher education, and their well-equipped and well-conducted universities and professional schools of law, medicine, engineering, and theology.

Weeks may be occupied here, in the most luxurious surroundings, in enjoying and becoming acquainted with these great neighbors of ours in the southern portion of this, our twin



AVENIDA FLORIDA



MEMBERS' STAND, ARGENTINE JOCKEY CLUB

continent, where the weather is never colder than 40°F., nor warmer than 80°.

Zoological Gardens—Señor Clemente Onelli—Señor José Luis Cantilo

WE spent a most interesting afternoon in the Zoological Gardens under the guidance of its founder and director, Señor Clemente Onelli. This wonderful garden has been the life-work of Señor Onelli, and to him the people of Buenos Aires owe and inestimable debt of gratitude. At tea time we were joined by His Excellency, Señor José Luis Cantilo, the Municipal Intendente, a most interesting and agreeable man. He is the chief executive of Buenos Aires, and is untiring in his work for his city, being personally interested in all of its activities, including its hospitals. Later he sent us tickets for a great open-air municipal concert, given on Sunday evening in one of the parks and attended by thousands of people. Both the Intendente and Señor Onelli were most thoughtful and courteous in their attentions to the ladies of our party.

Argentine Jockey Club

ON Sunday, Dr. Robert Halahan took Dr. Watkins and me to the golf club, where we enjoyed playing over a very attractive course. The ladies joined us at luncheon, and later we attended the races at the Argentine Jockey Club. Although it was out of season, the races were most interesting, and we could well imagine how much of a society show-place it is in the height of the season. The race track, with its comprehensive equipment and club houses, and members' stand of unrivalled beauty, has made the Argentine Jockey Club one of the great sporting clubs of the world. The receipts from this enterprise, over and above the necessary expenses for up-keep, are distributed among well deserving charities.

One naturally visits the Plaza del Congreso, a great court of honor with garden plots, fountains and statues. In one direction, along the Avenida de Mayo, a great thoroughfare carved into the old city, is the President's Palace, and in the other, with an imposing approach, is the National Capitol. (This street was not named for our distinguished surgeons, but for the month of May in which, in 1810, occurred the declaration of independence of Argentina.)



RACE TRACK, ARGENTINE JOCKEY CLUB



SPANISH MONUMENT

President Hipolito Irigoyen

I HAD the privilege of an audience with Dr. Hipolito Irigoyen, the distinguished President of Argentina. My object in visiting the President was to convey to him information about the memorial to General Gorgas which is in contemplation for Panama. I found my distinguished host very sympathetic to the project, and fully acquainted with the work and reputation of General Gorgas. The President has a very charming personality, a strong physique, and a dark serious face. My interview with him, which was conducted with the Secretary of the American Embassy as interpreter, was extremely interesting and satisfactory, and I felt that I had added one more influential link of friendship to the Gorgas memorial.

On approaching the palace, and while awaiting the time for my appointment, I was particularly struck with the gaudiness and quaintness of the uniforms which are worn by the guards. The Secretary of the Embassy who accompanied me said that these men are the guards of honor to the President; that they belong to the Mounted Grenadiers, a corps that was famous in the time of San Martin, and that they have the privilege of wearing



GEORGE WASHINGTON MONUMENT

the same type of uniform that was worn by the veterans under that famous warrior in the war for independence.

Statues

THE many beautiful fountains and groups of statuary scattered throughout the parks and in the open spaces form one of the greatest attractions of the city. At the time of the centennial of the independence of Argentina in 1910, the principal nations of the world presented monuments commemorating the event. Of them the Spanish monument is the most conspicuous, while the United States is represented by a dignified statue of George Washington. However, one seldom sees a vantage point in this beautiful city without something that will appeal to one's artistic taste. There are no bare spots and no glaring defects. Fortunately, nature here embellishes so rapidly with its foliage and its flowers that sordidness and abandoned spots never prevail.



EL TIGRE HOTEL

El Tigre

ONE of the impressive and distinctive features in the environs of Buenos Aires is El Tigre, an interesting freak of nature which transforms a large area of land contiguous to the Rio de la Plata into a group of small islands. Natural waterways, varying from twenty to two hundred feet in width, have made of this area of land and water a symmetrical checker-board, which extends for many miles. On the islands created by the waterways are estates with handsome homes, orchards, flower gardens, wharfs, and bathing places, while in the surrounding channels are myriads of motor boats, row boats, and pretentious yachts. This wonder of nature, twenty miles distant from Buenos Aires, is one of the summer resorts of the metropolis and may be reached by boat, tram car, railroad, or automobile. On our previous trip, Dr. Pedro Chutro, one of the distinguished surgeons of Buenos Aires, introduced us to this interesting place. On our second visit, our hosts were Dr. Frank Pasman and his uncle, Mr. Wilson. The trip made by automobile is most enjoyable as it follows more or less closely the river, traverses some interesting towns, and passes many

attractive estates. The whole country about this southern city is one beautiful garden in which is grown everything that gladdens the eye and aids in the sustenance of life.

On arriving at El Tigre we visited an attractive Rowing Club and then embarked on a smart little motor boat belonging to Mr. Wilson. Because of the regularity of the turns, and the symmetrical division of the land into islands without number, one almost duplicating the other, it was difficult to realize that we were traveling otherwise than in a circle as we traversed mile after mile of the water passages. However, each island was a new creation with its distinctive home, its distinctive dock, its distinctive foliage, its distinctive flower garden, and its distinctive orchard. Often great weeping willow trees obscured the shore line and beyond one caught glimpses of a villa, and at other places peach, plum, quince, or other fruit trees spread their boughs over the water's edge, tempting one to pick and eat.

On this second occasion for two or three wonderful hours we explored this Venice-like territory. Once we disembarked at an island that was owned by a friend of our host. We visited the flower gardens, the vegetable gardens, the vineyards



EL TIGRE

loaded with luscious grapes, the chicken farm, and then the playgrounds and the tennis court. Later in the afternoon we landed at an attractive dock and here, at a little tea house, we sat and had our tea, sandwiches and fruit.

Mr. Wilson took us to what he called his "shanty," a comfortable bungalow located on one of the smaller islands, where he has everything for which his heart could wish to make life worth living. A large friendly dog met us at the dock. Within the house we were introduced to the Señora and other friends and children, and in the grounds surrounding the house we saw the chicken yard, bee-hives, a vegetable garden, and an abundance of flowers; everything trim and beautifully kept. Each morning after his plunge and his fruit and coffee Mr. Wilson goes to the station in his motor boat as we go to our suburban stations in our automobiles.

El Tigre is one of society's retreats; but the people of the great city are privileged to enjoy the unusual beauty of the place. A large hotel and an amusement pavilion occupy a site on one of the principal waterways near the tram and railroad station, and from here at frequent intervals excursion boats make a tour of the principal water avenues. Our day at El Tigre with our charming hosts was one long to be remembered.



EL TIGRE

HACIENDAS

WITH Dr. and Mrs. Mayo we enjoyed an excursion by automobile as guests of Dr. Herrera Vegas to his *hacienda*, or landed estate. We were accompanied by Dr. Cranwell and his daughter, and Dr. Pasman and his cousin. The *hacienda* consists of forty-five square miles of agricultural territory lying about half way between Buenos Aires and LaPlata. This is one of the largest and most attractive landed estates in Argentina. This day's visit to Dr. Herrera Vegas' estate, which is one of the side interests of this remarkable surgeon, is worthy of a separate chapter. However, we may fix in our minds a few commercial facts regarding this estate, on which there are one hundred thousand cattle, two hundred thousand sheep, and other animals in proportion, and on which is raised quantities of grain, corn, and produce.

Upon another day we were the guests of Señor and Señora Miles Pasman, most interesting people. They speak English perfectly and have the appearance of substantial New Yorkers. They were both born in Argentina, but of parents who had but a short time before migrated to that country from New York.



EL TIGRE

Their son, Dr. Rodolfo Pasman, is one of the distinguished surgeons of Buenos Aires, and their nephew, Dr. Frank Pasman, another young surgeon, has recently married one of their daughters. They wondered if we would enjoy an afternoon motor ride to their country place. Our delightful experience of the year before, when we had visited the *hacienda* of Dr. Herrera Vegas, made us anxious to go with our new friends to their estate, which they so modestly called "a camp." There were two machines, and our ride took us out of the city a distance of about fifteen miles. The "camp" proved to be an estate of many acres with many buildings for the proper care



EL TIGRE

of their large family, places for the care of live stock, a poultry yard, power plants, swimming pools, and tennis courts. In the conservatories are found every modern device to care for a comprehensive botanical garden, in which not only specimens of all South American trees and shrubs are housed, but also under careful cultivation many of the plants of other climes, all properly labeled and cared for by an enthusiastic expert head-gardener with an army of helpers.

The house, a charming residence of manor house capacity, located in a large park-like portion of the estate, was one of the surprises of this mere "camp." But the glory of it all came when we began to meet the family. A number of daughters and daughters-in-law were enjoying the hospitality of the "camp"; and then came their children, ranging from babes in arms to

dignified young men and women sixteen and seventeen years of age, all glad to see grandfather and grandmother. Everywhere one looked were these attractive grandchildren, each one a beauty, each one with distinctive characteristics, but each one a little aristocrat. Thirty-seven of them there are, and the proud grandfather has a standing offer of a bonus of one thousand dollars in gold to the mother of each additional one, with the stipulation that the bonus is automatically increased until the forty-fifth grandchild will bring a super-handsome solace. What a reproach this family is to our practical, barren people!

Inspection of the estate under the guidance of our enthusiastic host and hostess and their daughters, tea with the delightful grandchildren assisting at the function, good-byes, and the drive back to the city with the automobiles filled with flowers, left us with a picture of the home life of the best people of this purple country that excited our intense admiration.

LA PLATA

WE visited of course La Plata, the capital of the Province of Buenos Aires. The city itself, like our own Washington, was planned along ambitious lines, and a motor ride through its wide streets lined with palatial government buildings, universities, national museums and other public buildings is much worth while. But driving through the city proper at the time of year when the University is closed gives one the feeling that it is an abandoned city. Visiting it, however, as we did in 1920, we gained a happy impression of the capital city and its environs. At that time we were taken in motors from Buenos Aires to La Plata by our friend Dr. Herrera Vegas, and were the guests of the Faculty of the University.

We breakfasted in one of the corridors of the University. The professor of anatomy, Dr. Pedro Belou, made an address in Spanish, to which we responded in English.

La Plata, from a commercial standpoint, is fast becoming famous for its packing houses, established by Americans familiarly known as Swift, Armour, Morris, and Wilson.

LUNCHEON OF AMERICAN CLUB

EVERYWHERE in Buenos Aires one recognizes American and other English-speaking people. In 1920 Dr. Mayo and I were guests at the weekly luncheon of the American Club of the city. In 1921 Dr. Watkins and I were invited

to fill a "return engagement." It was inspiring to meet about three hundred English-speaking business men of Buenos Aires in the large banquet hall of the Plaza Hotel. The group impressed one as would a great human dynamo; scarcely a man among them was over forty-five years of age, and many were very much younger. The southern climate apparently had not changed their natures, as they were alert and clean-cut in appearance. The American Club has assumed the task of acting as a board of censors or credentials on Americans who come to Buenos Aires to do business. Adventurers or dishonest bluffers are not wanted, and there is a genuine desire on the part of this organization to secure for the American business man the respect of the Argentines. And while they are doing business in Argentina, like the Englishman, they remain loyal and devoted to their own country.

We were the guests of this Club on the fourth of March. Therefore, in concluding my short response as their guest I reminded them that at one o'clock when I began my talk a great President of their country had retired from an honored administration. At the mention of Mr. Wilson's name they all arose and applauded for a full minute. At the close of my remarks I said that now a new President had assumed control, and, not as Republicans or Democrats, but as Americans, I suggested that they drink a health to the new President, Mr. Harding, to which they again responded with enthusiasm. One cannot overestimate the influence of an organization like the American Club.

HOSPITALS

THE hospitals in South America, not unlike the hospitals in other civilized portions of the world, may be divided into several classes. One of the objects of our trip was to obtain a bird's-eye view of the hospitals in the cities we visited. We passed through, very hurriedly of course, a number of the principal hospitals in each of the capitals, Valparaiso and a few other cities. With only minor exceptions, they all had suitable buildings and interiors, and opened onto extensive and attractive gardens or patios. Without exception, I believe all of them have a system of case records, and the average of completeness in this respect was above that found in the United States. Everywhere working laboratories, including X-ray outfits, were in evidence and were pointed to with pride The operating rooms, with but few exceptions, were modern, and contained the most approved sterilizing apparatus. Conveniences for diagnostic purposes, and instruments for operat-



ART GALLERY

ing rooms were in abundance. Nearly all had provision for postmortems, and up-to-date morgues. The provision for graduate internes seemed to be adequate, especially in those hospitals connected with teaching institutions. Mostly all of the large hospitals had rather complete out-door dispensary departments. Some were deficient in modern plumbing; but a large percentage of the important hospitals were elaborately equipped with these conveniences. Some had the most approved hydrotherapeutic departments, and modern laundries and kitchens were in evidence in nearly all of the larger institutions. The hospitals which did not have the full equipment as enumerated above were not a few, but nearly all of these are in line for a rapid readjustment. Especially is this true since their teachers are thoroughly alive to the requirements of a modern hospital.

Two defects which were evident in nearly all of the hospitals visited were the lack of screening against flies, mosquitoes, and other insects, and a well organized system of nursing. The former of these will soon be remedied, but the latter is a difficult problem with which the faculties are wrestling. It was not a defect pointed out by us, but a fact freely admitted by our hosts.

The Modelo Instituto Clinica in Buenos Aires may well be taken as a model for all hospitals built in a similar climate. It is one of the most beautiful from the standpoint of architecture and grounds, and its equipment, as far as we could judge, with the exception of the nursing organization, is complete in every detail. It was built as a model by the government of Argentina, and is maintained as such, which fact evidences the yearning of the people and the profession of this country for the best that can be devised. This hospital is also completely screened.

Dr. Mayo's Comments on Argentine Hospitals

"MANY of the thirty hospitals in Buenos Aires are old, but practically all are in a process of reconstruction along modern lines. The hospitals have high ceilings, large window spacing, verandas and gardens, well suited to the tropics, but they are not screened. Trained nurses, as we understand the term in the North, do not exist in South America. There is only a small middle class from which to draw material for nurses; it is obviously impossible under present conditions to obtain students from the cultured class qualified for such work. However, the general average of education is being raised, and new training schools are being established with American nurses in charge. The records in all the hospitals are extraordinarily good. Few hospitals in America can show records equally well kept.

"Almost all the hospitals and charities in Buenos Aires are financed by the Women's Benevolent Association, which collects and dispenses funds. The municipal authorities are said to be very jealous of this organization; but it is so strong, and the money is so well administered, that no real objection can be filed against it.

"The Rivadavia Hospital occupies almost an entire block of land and is divided into medical, surgical, gynecologic and maternity departments. In the museum of the latter are many rare and well preserved specimens, as well as a very complete and well selected teaching collection. In the department for children is a fine infants' clinic.

"The new medical hospital is under the direction of Dr. Agote. Its organization and its records are models of excellence. Clinical work and investigation of the most extensive and advanced character is being carried on. Dr. Agote was the originator of the citrate method of blood transfusion and has perfected the technique of the procedure. A detailed descrip-

tion cannot be given of all the important features of this institution, but the American student of internal medicine who arranges to spend a year with Professor Agote will, indeed, be fortunate.

"The British Hospital in Buenos Aires has two hundred beds. Dr. O'Conner, senior surgeon, well known in the United States by his frequent contributions to American surgical journals, and Dr. Robert Halahan, are the surgeons in charge. Dr. Halahan, the junior surgeon, was educated in Ireland about twenty years ago. After coming to Buenos Aires he passed the examination given in Spanish. He is quite American in his methods. Many Americans go to this hospital when they are ill."

SURGEONS

WE met the committee of surgeons of Argentina which was interested in our mission in behalf of the College of Surgeons. In the conference were Drs. Vegas, Cranwell, Chutro, and Palma. Buenos Aires has a strong body of sur-



ENTRANCE TO A PRIVATE HOME

geons and surgical specialists. A modern city of a million and a half inhabitants, of necessity, would possess such a group. There are also a number of strong provinces of Argentina with cities of considerable importance. These, too, have their surgeons of quality. Our interview and discussion revealed the fact that the surgeons of this Republic are desirous of affiliating in the most cordial manner with the surgeons of the North American continent.

They submitted a list that they felt they could unreservedly recommend to the College. They also suggested a committee that would from time to time make further recommendations and pass on applications which naturally would come independent of them. It was gratifying to note the seriousness with which this group of men accepted the responsibility. The tentative list recommended contained the names of many men whom we had met on our previous visit. It is not an exaggeration to say that it would be difficult to find a group of surgeons in any capital of Europe or America which would excel the following:

Benjamin Abalos
Nicomedes Antelo
José Arce
Enrique Bazterrica
Eduardo Belaustegui
Pedro Belou
Pedro Benedit
Adrián J. Bengolea
Pedro Ovidio Bolo
Guillermo Bosch Arana
Bartolomé N. Calcagno
Pedro Caride Massini
Maximo Castro
Alejandro Ceballos
Antonio F. Celesia
Pedro Chutro
Oscar Copello
Daniel J. Cranwell
Juan B. Emina
Enrique Finochietto
Ricardo Finochietto
Angel G. Gallo
Avelino Gutierrez
Roberto Halahan
Marcelino Herrera Vegas
José M. Jorge (hijo)
Carlos Lagos Garcia
Adolfo F. Landivar
Luis Lenzi
Jorge Layro Diaz
Francisco Llobet
Adolfo M. Lopez
Castelfort Lugones
Bernardino Maraini
Salvador A. Marino
Armando Marotta
Arturo J. Medina
José F. Molinari
Angel F. Ortiz
Pascual Palma
Rodolfo E. Pasman
Julio S. Passeron
Pedro del Pino
Aquiles Pirovano
David F. Prando
Rodolfo A. Rivarola
Carlos Robertson Lavalle
Alberto Rodriguez Egaña
Ricardo Rodriguez Villegas
Manuel Ruiz Moreno
Ricardo Sarmiento Laspiur
Eliseo V. Segura
Roberto M. Sole
Ricardo Spurr
Miguel Sussim
Nicolas Tagliavache

Luis A. Tamini
Herman Taubenschlag
Delfor del Valle
Leandro Valle
José A. Viale
Marcelo T. Vinas
Arturo Zabala

DR. MARCELINO HERRERA VEGAS

DR. Marcelino Herrera Vegas, who is easily the dean of surgery of the southern continent, is a man whom it is an exceptional honor to know. He has the face of a seer, and he possesses a sensitive, æsthetic temperament. He is of a family of distinguished Argentines, the estate of which dates back to the founding of the Republic. His town residence is a palace—the repository of works of art in painting, sculpture, literature, and the furnishings of a refined household. His library, with its gallery, is a cabinet of exquisite taste and appropriateness. With his own hands he has cross-indexed and catalogued the contents. The books, all his friends, are clothed in appropriate and substantial bindings, as he would dress his sons and daughters whom he loves. He writes with his own hand his literary contributions and gets recreation by making his own research. When his eyes and brain are tired, instead of playing games, he practices his languages and reviews his poets by writing plays in long-hand and by copying his favorite poems. He has twice written the plays of Shakespeare in long-hand to aid him in perfecting his English. To illustrate some point in conversation, he occasionally quotes to you a thought from an English, German, French, or Spanish poet, and then repeats the exact words with the interrogation: "Do you remember?" And, of course, as a rule you do not. Men of his class seem to have sufficient time in which to crystallize their knowledge, and they have a knack of utilizing their learning without appearing ostentatious. Dr. Vegas would rather know thoroughly the great thought of a master, in order that he might live it, than be the originator of something but little better than the commonplace. We, in rapid-fire America, must seem crude and immature in comparison with the associates of this man who reads his classics, and who has gained for himself a knowledge of the best of the ages. And with it all he is a practical teacher of surgery; he is a skilled operator; he endeavors to redeem the cripples and to save the lives of the poor of Argentina; he is a scientific man in the understanding of his art; he visits hospitals, dresses wounds, is a time-server, follows schedules, and consults time tables. When the summertime has come and he is



DR. MARCELINO HERRERA VEGAS

Professor of Surgery and Dean of the Faculty of Medicine, University of Buenos Aires

through with his classes and the day's work is done, he does not employ his time in useless play, but goes to his *hacienda* and lives in the out-of-doors with the companions of his estate, and supervises the cultivation of the land. He watches trees grow that were planted by his grandfather, and he plants trees that will be watched and enjoyed by his grandchildren. This is our friend as we learned to know him—a superb character, a true gentleman, and one who is greatly admired by his confrères.

Dr. Mayo's Comments on Buenos Aires Medical Institutions

"ONE of the most respected of Buenos Aires' notable surgeons is Herrera Vegas, a man of great wealth and philanthropy, and an inspiring influence for good in the medical profession. Dr. Vegas speaks four languages fluently. He has contributed to literature several monographs on special surgical subjects, and in conjunction with the eminent surgeon, Dr. Cranwell, he has prepared an important work on hydatid disease. The chapter devoted to hydatids of the lung will be particularly interesting. A large number of these cases were seen in the several hospitals. Hydatid disease is very common in South America, and is thought of whenever a patient presents unusual symptoms. When these cysts occupy the lungs, the fluid can be agitated by motion and the waves can be reproduced in moving pictures. Dr. Vegas has one of the finest private libraries in South America.

"Dr. Pedro Chutro, one of the professors of surgery at the medical school, is well known in the United States. He served with the French during the Great War in charge of a large hospital in France, and it is generally conceded that his work was not excelled by that of any other surgeon. At the close of the war he was requested to go to New York to demonstrate in the military hospital there his original methods of dealing with old infected compound fractures with osteomyelitis. Professor Chutro was decorated by the United States with the Distinguished Service Medal; he is one of the few foreign surgeons to receive this honor. Dr. Pasman, one of the professors of surgery in the medical school, is also well known in the States. All the surgical work we saw in Buenos Aires was good, and carried out with characteristic skill and precision. The surgeons of Argentina compare favorably with those of any other country in the world.

"The chief medical school of Argentina is located at Buenos Aires and is a part of the university. The building is a dignified structure and occupies two city blocks. The school has an enrollment of five thousand students. The course is seven years, but so rigid, particularly in theoretical branches, that only about one-fourth of the students graduate in this time. Many spend eight, nine, or even ten years in obtaining their degrees. Approximately two of the seven years, however, are spent on physics and chemistry, studies that are pre-medical in North America. Public health, dentistry and veterinary medicine are under the direction of the medical school. Pre-medical courses in anatomy, chemistry and the fundamental branches are also given at the La Plata University, about forty kilometers from Buenos Aires. The department of anatomy at La Plata, under the direction of Dr. Pedro Belou, is unusually good. I was much interested in some researches in human and comparative anatomy of the liver and gall-bladder which he had under way. The museum of natural history of La Plata is said to be the finest in South America, and we spent a half day with the curator, the venerable Professor Quevedo, observing its wonders. The anthropological collection is unique."

Dr. Mayo's General Observations

"ARGENTINA is readily accessible from Chile by the Trans-Andean railway. The frontier is reached at a height of about three kilometers above sea level, at which point the railway tunnels its way through four kilometers of mountain range underneath the old pass. The railroad follows the Rio Blanco on the Chilean side by a very sharp ascent and many windings, often uncomfortably close to the edge of the narrow ledge on which it is built. On the Argentine side the descent to the pampas or great alluvial plains which extend from the foot of the Andes approximately eight hundred miles to the sea is less abrupt, and follows the cañon of the Mendoza River.

"At least a third of the nine or ten million people of Argentina live in cities, more than a million and a half in Buenos Aires alone. The country is very fertile, naturally without trees, but eucalyptus, Lombardy poplar and weeping willow trees have been planted freely in certain districts. The land resembles that of the Dakotas, and is farmed in very large tracts or *estancias*. The land owners have become enormously wealthy. Blooded cattle may be seen in herds of



AVENIDA DE MAYO

many thousands. Argentina, with its rich lands, situated largely in the temperate zone, will eventually become the United States of South America.

"The railroad system in Argentina is excellent; the equipment and management are on the continental plan. Buenos Aires, which of late years has been controlled by the radical party, dominates the country politically. Laws controlling the disposition of property on death, to break up the large estates, have been passed recently. Strikes are initiated with or without reason, and industrial disturbances are constantly occurring. Recurring longshoremen's strikes have seriously interfered

with shipping for a long time, and grains, hides, wool, sugar, cotton and many other of the world's necessities have accumulated in Argentina during this period. Numerically the Italians are the dominant race. The Spanish, English, French, German and American colonies are relatively small.

"Buenos Aires is a beautiful city, the Paris of South America. Its gardens, parks, sidewalk cafés, boulevards, statues and ornate buildings give it a charm that is all its own. There is



IN PALERMO PARK, BUENOS AIRES

a public lottery system in Argentina, and the profits are used for charities. Horse racing is the national pastime, and in this sport Argentina leads the world. The Jockey Club is controlled by the government, but is privately managed. The betting is princely; thousands of dollars are lost and won each racing day. Little attempt is made to control the liquor traffic.

"The general standing of education in Argentina is high. The primary course is five or six years, depending on the ability of the student, and is compulsory. Argentina has four hundred school buildings on the American plan, most of them modern

and completely equipped, including lunch rooms, where bread and sterile milk are served to the pupils without charge. The second course is six years, but is not compulsory. Modern languages are taught in this course, and the pupils are not considered 'educated' until they have acquired at least three, at the present time Spanish, French and English. One unique feature of the university system in Argentina is the method of control. One-third of the votes are in the hands of the full professors, one-third in the hands of the junior professors and instructors, and the remainder with the students. Strikes by the students are not infrequent, and all classes are suspended until a settlement is reached. It is difficult to obtain an unprejudiced opinion of this innovation in Buenos Aires, but it may at least be said that it is popular with the students. The day we visited La Plata University the medical students were on a strike. Even in the primary schools strikes are frequent. A recent student strike of pupils under ten had to be settled on bended knees, the parents furnishing the knees and the shingle."



SEÑOR BALTASAR BRUM
President of Uruguay

CHAPTER VIII

URUGUAY



THROUGH the port-holes of our state-room on the palatial steamer which conveyed us on our first trip from Buenos Aires to Montevideo we could see the mountain that was observed four centuries ago by the Portuguese sailor, from whose outcry, as the story goes, the city of Montevideo received its name. The hill now appears small as compared with the city of Montevideo; but with its small fortification and flag-staff, it offers its welcome to the stranger.

This peninsula city, with its extensive sanitary docks, resembling those of Panama, is another of the beautiful cities of the world. It is the hub of the proud little country of Uruguay. It is strictly a modern city, with interesting architecture, parks, boulevards, and public buildings of importance and dignity. The city houses a population of sturdy, dignified, business-like people who reliantly meet you face to face. Like the peoples of the other South American countries, they evince no trace of provincialism. They know their Europe and North America, and they are thoroughly cosmopolitan. This country, early in the colonization of its land, was the melting-pot of competing Portuguese, Spanish, and English; and later in its development it waged a struggle for independence against Argentina, Paraguay, and Brazil, the contenders for its attractive acres. Like all of the principal South American countries, it finally emerged from its formative struggles and quietly established its independence in the early part of the nineteenth century, when the mother country, Spain, was busy in its own reconstruction after the long Napoleonic wars.

"No, we are not Spaniards," they will say, with spirit. "We are Uruguayans." "But," the American will reply, "You certainly speak the Spanish language." "Yes, we do speak Spanish; and you, as Americans, speak English. But



SCENE IN URBANO PARK, MONTEVIDEO

surely you do not acknowledge that you are English." And so the principal city, of which they are so justly proud, has grown to a metropolis of nearly five hundred thousand inhabitants.

Uruguay, in its government, is one of the most progressive states in the world. In the conduct of its business, it utilizes in the most thrifty manner its great production of live stock, harboring immense packing plants and carrying on an industry of great profit. The country was one of the first to establish the eight-hour working day and to recognize the right of men who labor with their hands to sanitary homes and wholesome working quarters. There is a workman's compensation law.

The educational system of the country provides for and encourages a system of universal education, particularly emphasizing the primary branches. Its university system is comprehensive. Among its departments, under separate faculties, are literature, law, sociology, medicine, pharmacy, commerce, veterinary and other minor subdivisions, each with special laboratory, library, and museum adjuncts.

Uruguay proves its commercial supremacy by the fact that its financial standing is maintained at the highest mark, its



BATHING BEACH, PARQUE HOTEL

unit of currency being based on the gold standard which maintains it at a parity to that of the United States. The government controls the telegraph and postal systems, and has a rigid banking law.

This is a country of beautiful flowers. The climate is such that roses grow in profusion throughout the year. It enjoys a delightful summer, and lies far enough north to be beyond the frost line, so that the winters cannot be severe. The mean temperature in the winter months is 52°F.; spring, 64°; summer, 71°; and autumn, 61°. The mean temperature for eight years, to 1914, was, for Montevideo, 61°, the extreme maximum for that period being 96°, and the extreme minimum, 34½°. The average rainfall for the year, thirty-nine inches; the average fair, sunshiny days, 225 per year for eight years.

Its water supply is wholesome and pure, its streets are well paved and clean, and almost the entire circumference at its water's edge is swept by the wholesome waters of an inland sea in the form of a great fresh water river.

It is no wonder that these fortunate people present to one's view an air of contentment; that they have a spirit of optimism; and that they are industrious and prosperous.

Visit their country as you would visit France or Italy—to enjoy the perfection of climate and the charm of companion-



PARQUE HOTEL AND BEACH

ship with a cultured people. Go to their sea-ports, attend their operas in their palatial opera houses, learn of their business methods, and in your sojourn you will see many things that will give you food for enjoyment for the long winter evenings of your own wonderful land.

On our second visit in March, 1921, Dr. García Lagos, Dr. Enrique Pouey, and Dr. Juan Pou Orfila, three surgeons whose acquaintance we had made the previous year, were our hosts this morning. They met us at the dock and carried us across the city to our hotel, which faced the sea on the other side of the peninsula. We were comfortably located in pleasant rooms with balconies that overlooked one of the popular bathing beaches.

At three o'clock in the afternoon we were taken for an automobile ride by Dr. and Señora Pou Orfila, who were our gracious hosts on several occasions. Professor Pou Orfila is one of the distinguished gynecologists of Uruguay who, we hope, will soon honor us with a visit to the United States. We drove to Pocitos, one of the beach resorts close to the city, then along a new boulevard that is under construction, and which when finished will skirt the river for many miles. It is called the Rambla Wilson, in honor of ex-President Wilson. At Pocitos the Rio de la Plata is many miles in width and is

really an arm of the ocean. A long swell constantly breaks upon its beach, not unlike that of the ocean itself.

In the few days at our disposal in Montevideo, between professional duties, we were very busy visiting the many points of interest. We took a trip to "El Cerro," the famous Spanish fort on the hill, near which has been built the Swift Packing plant. We motored to the new Carrasco Hotel which will soon popularize another fashionable beach resort. We drank tea, inspected the beach, watched the roulette players in the attractive casino which is a part of the hotel, and returned home over the Rambla Wilson. It is curious to note that this little progressive Republic recognizes and is indirectly a patron of roulette and other games of chance. Several casinos are conducted, or at least countenanced and licensed, by the municipality of Montevideo, and excess profits from this source are devoted to the maintenance of charitable institutions.

SURGEONS AND HOSPITALS

WE were anxious to see some of the surgeons at work in their hospitals, and accordingly at seven forty-five on the morning of the third day, Dr. Watkins and I were taken



CARRASCO HOTEL



DR. ALFONSO LAMAS

Professor of Clinical Surgery
University of Montevideo, Uruguay

by Dr. Lagos for a clinical visit. Dr. Lagos speaks English perfectly and acted as our official interpreter and guide during our sojourn in Montevideo. He is thoroughly in touch with the medical profession of Uruguay.

We proceeded to a small private hospital, conducted by Dr. Alfonso Lamas, where we saw him perform the first operation of a two-stage procedure for hydatid cyst of the lung, under local anæsthesia. The pleura opposite the cyst was opened through a trap door created by removing a portion of the rib. An aseptic plastic adhesion was anticipated, a closed track established, and the cyst drained at a later date, á la Bevan's operation for abscess of the lung. Dr. Lamas quoted Dr. Bevan frequently and gave him credit for the idea. This surgeon showed us his record of the case, his X-ray findings, and every evidence of the most careful diagnostic routine. He operates, as do all of the South American surgeons whom we have seen, with the French technique. We had nothing but the greatest admiration for the work of this surgeon, and found that he had operated upon a large number of hydatid cysts of the lung which are very prevalent in the southern portion of South America.

Later we went to a well equipped British Hospital where Dr. Lagos does his work; also to a new Italian Hospital, one of the show-places of medical Montevideo, which is built along very artistic lines and is the last word in modern hospital construction. We then visited the large civil charity hospital which is closely connected with the medical department of the University, and saw several operations by Dr. Alfredo Navarro, one on an old man who was suffering with acute obstruction of the bowel. This case had been well worked up with elaborate records, laboratory tests, and X-ray findings. Everything about the operating room indicated that good, safe operating was the accustomed routine. The acute obstruction in the patient in question was a complication of a chronic obstruction caused by a neoplasm in the sigmoid. A colostomy was quickly and skillfully performed under high spinal anæsthesia. He then operated on a second case for simple appendicitis. His technique was French, his assistants handing him the instruments, threading needles, and sponging the wounds. This procedure is necessary because they have not the advantage of our nursing organization. However, there was a very efficient helper present in the form of a strong, intelligent woman who brought supplies, hand washes, and did the rough work about the room. Dr. Navarro has an interesting personality and the appearance and actions of our own late Nicholas



DR. JUAN POU ORFILA

Professor of Clinical Obstetrics, Faculty of Medicine
University of Montevideo, Uruguay

Senn. A round ligament operation was performed in an adjoining room by two of the assistants in gynecology. The technique was thoroughly up to date, and the operation could nowhere in the world have been performed with greater skill.

Affiliation with American College of Surgeons

THE surgeons of Uruguay were found to be both ready and willing to affiliate with the American College of Surgeons. In 1920 a Committee on Credentials was appointed, of which Dr. Enrique Pouey is the Chairman and Dr. Horacio Garcia Lagos the Secretary. At the meetings of this committee held in 1920 and 1921 the following Montevideo surgeons were recommended for Fellowship in the College:

Baldomero Cuenca y Lamas	Jamie H. Oliver
Horacio G. Lagos	Manuel Quintela
Juan C. Munyo	Lorenzo Merola
Julio Nin y Silva	Alberico Isola
Alejandro Nogueira	Alfredo Navarro
Juan Pou Orfila	Carlos A. Bellieure
Enrique Pouey	J. J. Bado
Augusto Turenne	A. Llado
Manuel Albo	Lorenzo Lombardini
Gerardo Arrizabalaga	Manuel B. Nieto
Luis P. Bottaro	T. Arcos Perez
Miguel Becerro de Bengoa	Ernesto Quintela
Alfonso Lamas	Pascual Vero
Luis Mondino	Hector Auturrez Saravia

Dr. Mayo's Comments

"THE hospitals in Montevideo are modern and equal to any in South America. The older hospitals are built in the Spanish pavilion style, usually one story, with gardens between the pavilions. The new hospitals are several stories high. Here, as elsewhere in South America, there are few trained nurses and an absence of screens. I was told that when screens were placed no one respected their use, and, indeed, in the few instances where screens were seen they were carefully propped open. With the exception of the hospitals maintained by the colonies from various countries, those in Uruguay are supported by the government. Accommodations are provided for pay patients, and the price of rooms in the private pavilions ranges from $3 to $6 a day. One beautiful hospital (for women) is under the direction of Dr. Pou Orfila, a noted surgeon. The Italians have

a very beautiful hospital with many interesting features. To prevent flies from entering the operating rooms, persons pass from the main corridor through a small anteroom which has blue glass ceiling, sides and door. It has been demonstrated that flies will not pass through this blue-lighted space.

"The chief surgeon of the British Hospital, Dr. García Lagos, professor of surgery in the government medical school, is particularly interested in surgery of the stomach. He has developed a method of dealing with gastrojejunal ulcers and hæmorrhages from the gastro-enterostomy opening by making an incision in the anterior wall of the stomach, drawing the gastro-enterostomy completely through, and then proceeding according to the necessity of the case. I have employed this method twice in emergency, such as hæmorrhage immediately after gastro-enterostomy, but have never used it in the manner described by Dr. García Lagos for a direct attack on chronic conditions involving the stoma. It would appear to have merit in suitable cases. Dr. E. Pouey, the leading gynecologist of Uruguay, has a fine hospital for women, just completed by the university. Dr. A. Navarro, another prominent surgeon of South America, has splendid hospital facilities and surgical material.

"The primary school course in Uruguay is five years and the secondary course six years. The medical school, a part of the University of Uruguay, is a large, ornate and dignified building. Six hundred students are enrolled, and the graduating classes number from sixty to seventy. The course in medicine is seven years. The medical school has a fine library. The laboratory facilities and equipment are excellent, and there is ample material for dissection. Postmortems are permitted on all patients dying in the hospitals.

"Uruguay, with one and one-half million inhabitants, has a great agricultural future. In general, the people are like the Argentines. The public administration is extraordinarily efficient. Montevideo, the capital, has about 400,000 inhabitants. It is a clean, attractive city, with streets well paved, even in the outskirts, and many fine parks, boulevards and suburban seaside resorts. It is considered by many travelers the most beautiful and healthful residence city on the east coast of South America. One of the boulevards, extending eight miles along the ocean, is named for ex-President Wilson. The city is a hundred miles below Buenos Aires on the outlet of the La Plata River, which forms the southern boundary, the ocean forming the eastern boundary.

"Gambling is a legitimate pastime, or vice, throughout South America, and Uruguay is no exception. The government

supports beautiful hotels, seaside pavilions, hospitals and other charities from the proceeds of the roulette wheels. Montevideo is the Monte Carlo of South America.

"During the Great War, Uruguay stood staunchly with the United States, and her President, Señor Baltasar Brum, a brilliant young statesman who is well known in diplomatic circles in Washington, and the able foreign minister made decisions which will be permanent additions to international law: in substance, first, that a republic fighting for her sovereign rights is not a belligerent and has the right of asylum and protection from all republics, and, second, that when the United States is forced into war to protect her rights she is protecting the rights of all republics, and all republics become parties to the conflict. Uruguay promptly followed the United States in declaring war on the Central Powers."

PRESIDENT BALTASAR BRUM

THROUGH the courtesy of Mr. Robert E. Jeffery, then American Minister to Uruguay, I had the pleasure of an interview with the President, Señor Baltasar Brum, a young man, apparently not more than thirty-five years of age, who possesses a strong and agreeable personality. Dr. Browning, a gentleman to whom I am under great obligation, acted as my interpreter.

My object in seeing the President was to bring to his attention information about the proposed memorial to General Gorgas. As this memorial will undoubtedly take the form of an institute for the study of tropical medicine, he showed a sympathetic attitude.

BANQUET AND RECEPTION, PARQUE HOTEL

A VERY pleasant diversion and a function that flattered Dr. Watkins and me was a dinner given to us at the Parque Hotel by some of our surgical friends of Montevideo. Our table occupied a conspicuous place in the center of the main dining room and recalled to my mind a similar luncheon that was given to Dr. Mayo and me during our one day's visit the year before.

Later in the evening, in the ballroom of the hotel, a reception was tendered to Mr. Jeffery, our American Minister who was about to return to the United States. We were present and had the pleasure of introducing some of our friends to Mr. Jeffery and the other members of the American Colony with whom we had previously become acquainted.



PRESIDENT OF BRAZIL

CHAPTER IX

BRAZIL



IN January and February of 1920, when Dr. W. J. Mayo and the writer visited Peru, Chile, Argentina, and Uruguay, we were unable to make satisfactory traveling arrangements to visit Brazil.

We have long been aware of the high reputation accorded to the medical profession of Brazil. Through correspondence we had learned something of their institutions, and through the visits of some of their men to the United States we had become personally acquainted with a few of them. But it was with unusual curiosity and with no little anxiety that we looked forward to meeting them in their own country and in their own environment. Our visit included the capitals of the two principal states—São Paulo and Rio de Janeiro. We deeply regretted that we could not visit the other medical universities, particularly those at Bahia and Pernambuco.

The professional man perusing this sketch may criticise it for its details pertaining to some of the impressions gained by travel in a tropical country that is so different from our own country; but one must be adamant to travel in Brazil and not be fascinated by its wealth of physical beauty and the charm of its interesting people. Therefore, at the risk of tiring the reader by details, and in order that he may see things as they appear to the casual traveler in obtaining his first bird's-eye view, I shall quote extensively from my log written from day to day, supplementing, where necessary, with additional notes.

Instinctively one thinks of that great tropical country of the southern continent of America as *Brazil, the brilliant!* Its area is larger than the great central republic of North America; it is a virgin empire the material resources of which are inexhaustible, awaiting the next advance in scientific civilization to enter into competition with the world in supplying its

people with food and the other material luxuries of life. Its southern coast border, with its enterprising people is already accepting the teaching of the sanitarians, and is enjoying the first fruits of the new awakening.

The tropical and temperate climates run their regular courses in this favored land. Great rivers afford passage to the shipping of commerce, and irrigate plains which are unlimited in their productive power. The sea-coast is equipped with harbors that could accommodate all of the navies of Europe and America. The mountains are rich in gold, silver, and the other useful metals. There are also the great wheat plains, grazing pastures, fruit lands, coffee and rubber plantations, and exhaustless fields of aromatics, spices, and medicinal plants, extensive oil fields, and millions of square miles of buried coal. From the mountains and the rivers can be harnessed power that will turn every wheel of commerce, and provide locomotion, heat, light, and refrigeration for millions of people.

The people of Brazil are a composite of races upon which a marvellous civilization may and will be expanded. A group of Portuguese with sea vision, with romance in their souls, and with adventure in their blood, discovered and explored this paradise coast in the name of their country. They left their progeny among the aborigines, and later among the early settlers. Within a century the restless spirits of the overcrowded and overgoverned countries of western Europe learned of these sunlit coasts and productive lands, and their freedom loving instincts took them to Brazil. Scots, English, Irish, French, Dutch, and Germans and many of the inhabitants of sunny Italy made the voyage and were absorbed by the warm-blooded early comers, and they have developed a people of character and strength in which is commingled the blood of all nations. They are not merely the warm-blooded, easy-going Portuguese with all of their culture and romance, but they are the best of these with the practicability and strength of body and character of hardy Europe, all moulded into harmony by a tropical climate.

And now the value of civilization, with its scientific methods, has been recognized by these people. Without sanitary methods, the productivity of the tropics would be defeated and progress among the most hardy people would be discouraged. Disease and pestilence cannot resist the disease-infected tropics without the application of remedies that are offered by modern science and medicine. The Brazilian civilization has recognized this and has redeemed the border of its great area to health and safety and transformed



TROPICAL SCENE IN BRAZIL

the dreaded pestilential regions to health resorts for all peoples. When this is gradually extended, when the people learn the rules of health and in their added strength conquer the jungle, then Brazil will become a magnified Santos, São Paulo, and Rio de Janeiro.

With this will come the use of great power plants, the development of roads, the illumination of cities, the refrigeration of the heated areas, and the heating of the cold places. It will mean the production of food that can be spared, of coal and oil that can be spared, of lumber—hardwood and soft—that can be spared, of gold, silver, copper, iron, and other metals that can be spared; it will mean the development of a great commerce that will export this spare material to all of the world.

This nation, builded on romance, culture, and adventure, supplemented and aided by the labors of the hardy pioneers who sought freedom and the right to possess the fruits of their labors, mellowed by a tropical sun, with a love of beauty in their souls and a pride of heritage in their blood, and a realization of their responsibility to their God, is developing a country that has possibilities that are well nigh infinite.

And these are the people who are to be our hosts, and whom we shall learn to love.

MONTEVIDEO TO SANTOS

MARCH 9. Montevideo. Embarked on the SS. *Aeolus* for Santos, Brazil. Parted with our many friends of this attractive city. Sailed at 3 p. m. Minister Jeffery, our Uruguayan Minister, with his family, were on board en route for the United States. After a strenuous but most interesting week in Montevideo, the prospect of a three days' rest at sea was most welcome.

March 10. Long deck walks. The sea was smooth and blue, with a delightful breeze blowing and an agreeable temperature. Our prow was turned toward home and we had before us three weeks' exploration of a new country.

March 11. Met and conversed with Mrs. Lindsley, the daughter of Ambassador Stimson of Argentina, who was returning to New York. Her impressions of the people of Argentina are most gratifying. Had a long deck hike and conversation with Minister Jeffery. He is a lover of the people of Uruguay, and gives interesting sidelights on their character.



HOTEL IN GUARUJÁ

SANTOS

MARCH 12. Land reported in sight. Directly ahead of us appeared early in the morning a number of mountain-hills which resemble the old conventional bee-hive, cone-shaped, with rounded apex. Between two of these, which stand like sentinels, we steered our ship and passed in among a group of them ranging in height from one thousand to two thousand feet. Their dome-like tops appeared rocky and bare, but their bases were covered with a wealth of green. We were soon following an opening which wound about between the hills like a broad river, and discovered very shortly that this inland passage was the important harbor of Santos, the greatest coffee export market of the world. As we drifted into the harbor through its narrow approach, we passed light-houses, little hamlets with red tile roofs, and for the first time viewed a wealth of tropical growth that thoroughly satisfied us. It met the standard of the conventional ideas gained by description and pictures. Lofty royal palms projected above and lent dignity to a mass of feathery green foliage, in which were great trees covered with a purple, azalea-like bloom,



WOOD-BURNING ENGINE ON ROAD FROM SANTOS TO GUARUJÁ



MULE-DRAWN CARTS ON HARD SAND BEACH, GUARUJÁ

and a riot of colors produced by other unfamiliar trees and growth.

We came to anchor off modern docks like those at Colon, and at noon were conveyed by tender to the shore where a little narrow-gauge train with an observation coach attached awaited us. We were whisked across the island, and arrived at Guarujá, a suburb of Santos, located across a neck of land on a famous ocean beach. Here we were delightfully surprised to find a thoroughly up-to-date hotel facing directly upon the ocean. It was fairyland, and here one could stay a month, if one had the leisure, and be content. The large rooms of the hotel, with balconies overlooking the sea, with great white waves breaking on the long sand-beach, and cool breezes fanning the tropical heat to a delicious temperature, demonstrated why Guarujá is a favorite spot for the summer sojourn of the society of São Paulo and Rio de Janeiro. Immediately in front of the hotel, half a mile out in the sea, were two cone-like mountain islands between which rolled the open Atlantic. The curved beach, a mile in length, is hard, and over it one may ride in little two-wheel, mule-drawn carts, driven by small boys who easily entice one to make the delightful experiment. Between the hotel and the beach is an unusually

attractive park, and behind the hotel, with broad, well paved roads, lies the little village. The houses were originally of white stucco, with red tile roofs. In this climate they have assumed many colors. Before each little home is a fenced-in garden full of green and bloom. Back of it all is a range of bald-topped, green-based hills, literally packed with the greenest jungle, and everywhere in great blotches and in satisfying blendings are flowers of many colors. But after our strenuous journey, to sit on our balcony, to hear the ocean break, to bathe in its surf, and to walk about the fairy streets, gave us a life-time of pleasure. At evening in the west, in a notch between the black hills, as if to entice one from the sea, hung the crescent-shaped new moon, following the glow of the setting sun. The tropics was in our blood, and we could not help revelling in its beauty.

March 13. After assembling for our departure, we were agreeably surprised to find ourselves booked for an automobile ride back to Santos, ten miles away. The drive was over a fine road, our machines were modern, and our drivers were well trained. Our course at first was through a thick jungle, with a road just wide enough for the passage of one car. Above us and about us were banana trees, royal palms, and an im-



BEACH SCENE AT GUARUJÁ



SANTOS HARBOR

penetrable tangle of vines and foliage, and everywhere every color of blooming flower. At intervals little tunnels had been cut into the jungle, producing paths which led away to some hut, some telegraph pole, or other necessary terminal. The walls of these tunnels demonstrated the impenetrability of a real tropical jungle.

We arrived at Santos, after crossing a neck of the sea on a primitive ferry drawn by a cable and accommodating four machines at a time. Our second surprise was a drive of ten miles or more on a long, curving beach, almost as hard as asphalt. In many places here on the sea-side portion of Santos, where there are stately residences and hotels, were groups of bath houses on wheels, and every convenience for surf-bathing. In the sea itself were a number of islands of different sizes, some mere rocks projecting above the water, and some the usual thumb-like hills rising high into the sky. All along the shore the natives were in the surf, and everywhere, accompanied by nurse girls, were the children of the residents, wading, with their little legs bared, or splashing about in miniature bathing suits. Our drive of the morning took us through the suburbs—São Vincente, José Minino, Bogueirão, and Praia Grande, points of interest representing old landmarks. All too soon we drove through Santos, which is a business city of about one hundred thousand inhabitants, containing many beautiful

homes. Later we had a delicious luncheon at one of the fine hotels on the Santos beach, and at two o'clock we were driven to the station to take a train for São Paulo.

SANTOS TO SÃO PAULO

THE trip to São Paulo requires a little more than two hours of time. It will become, when known by travelers, one of the scenic pleasures of the world as it is now by reputation an engineering wonder. Many years ago a concession to build this railroad was granted to a foreign syndicate. The syndicate agreed to a provision which required that anything over a reasonable percentage of profit should revert to the government. Inasmuch as this railroad is the principal outlet of the great coffee-growing district of Brazil, the profits have been enormous, and the operating company has spent as much of the surplus as possible in improving the property. Besides a double-track road-bed which runs over the original right of way, a second double-track road for heavy traffic has been built, paralleling the original at a short distance. The road-



HARD SAND BEACH AT SANTOS



DRIVE, SANTOS

bed is wonderfully constructed and the rolling stock is of the best. The engine that carried us over a portion of our route was like a beautiful Swiss watch; the metal portions were polished like silver; and the artistic beauty of its cab and boiler excited our admiration. All culverts and sluice-ways on this mountain road (and there are many such) are lined with concrete and the concrete surface is painted a glossy black. These water-ways include gutters on either side of the road-bed, and in many places they extend high above the track on the mountain side and far below into the valley. The stations, switch houses, and all equipment are most extravagant but substantial in character.

After leaving the flat country near the coast, there is a steep elevation of the road which carries it within a short distance to an altitude of several thousand feet, São Paulo being approximately three thousand feet above Santos. For the short, steep climb of a few miles, a cog road is employed, a cable traction being the form of conveyance. The coast line of hills is rapidly ascended, and the views of the valley of Santos, of the harbor below, and of the scenes that develop in the rapid climb are most thrilling. A succession of round-topped mountains with their interesting valleys are rapidly passed in review as this



SANTOS

climb, which requires only a portion of an hour, is accomplished. On this day there was occasional rain and the mountain tops were at times covered with clouds; but the scene was fortunately not obscured by the mist. Above and below us was the deep tropical jungle with its mass of green, its trees of azaleas of glorious pink, and with a startling yellow bloom of a broom-corn nature. Everywhere spots of less vivid color heightened the effect of the green, dripping in the mist and rain. The clouds came and went and the mountains and valleys were constantly changed in light and shade. Occasionally the sun broke through the mist and threw enchantment into deep valleys or onto the mountain sides. The rain filled the water-ways and almost constantly our trestle bridges were spanning cascades that came from far above and dashed into the valleys as far below. Everywhere ribbons of water came tumbling down from some height to disappear in mist as they dashed upon the precipitate sides of the mountains. As a fitting climax to our trip, when we reached the heights the sun broke through and painted a rainbow in the valley that was far below us, and encouraged our superstitious minds to account it a good omen for our visit to Brazil.



RAILWAY, SANTOS TO SÃO PAULO

After completing our steep climb, we coupled on real engines and sped many miles over a comfortably level country that might have been Wisconsin or Michigan, except for the occasional palm trees. In many places cattle were grazing on these plains.

Dr. Watkins' Views of the Trip from Santos to São Paulo

"FOR scenery and railroad construction, this is one of the marvels of the universe. All profits in excess of a fixed percentage go to the state. This has resulted in an extravagant expenditure in construction and equipment which has been extended to the limit, except that the tracks are not silver-plated. For example, the waterways from the mountains are generously and artistically constructed from cut stone. The important feature of the ride is a climb of 3,000 feet which is made in a few miles by cable and a cogged track. The scenery can only be appreciated by personal observation. The traffic is very heavy, as it is the chief line of export for Brazil. Great care and skill is required in handling the traffic, as attaching trains to the cable is so arranged that the up and down going trains can only pass at the 'switches.'"

SÃO PAULO

WE reached São Paulo at about five o'clock. In its suburbs, through several of which we passed, there was an appearance of newness that reminded us of the approaches to our own western manufacturing towns. Many of the buildings were of red brick, of modern construction with acres of glass skylights, demonstrating the rapid and recent growth of the city. São Paulo is a city of four hundred thousand inhabitants, and it is enjoying a boom growth. As we approached the old city proper it showed signs of substantial construction of long standing, having the appearance of the old cities of Spain.

We were met by automobiles, and as it was Sunday afternoon, were taken immediately for a drive on the principal boulevards where the people promenade and drive and look upon each other on this day of rest and recreation. This gave us a most favorable impression of the residences of the wealthier people and a delightful bird's-eye view of the city in its holiday array. We then drove to our hotel, the Palace, and were prepared to enjoy our stay in this Chicago of the southern republic.

Our Mission

OUR object in visiting Brazil, primarily, was to meet the medical profession and interest them in the American College of Surgeons. Correspondence on our part had been undertaken as in other South American countries, but for some unaccountable reason we had not received a reply to our inquiries from our correspondent in São Paulo. My letters had been directed to Professor Arnaldo Vieira de Carvalho, the Director of the Faculty of Medicine of São Paulo and the distinguished Professor of Gynecology.

We were now settled in our hotel and as yet there were no signs to indicate that we were expected. This was particularly puzzling, inasmuch as a letter had been addressed to my correspondent not more than two weeks before. On consulting the telephone directory we found our correspondent's name and address.

However, we realized that this was the vacation season, and that there were many ways in which this silence might occur without design. So we decided to await developments.

Snake Farm at Butantan

MARCH 14. Today we visited the government snake farm. This is located about ten miles from São Paulo, and is reached by a fine automobile road which traverses interesting



INSTITUTO BUTANTAN

suburbs. At this farm, which is really a scientific experimental station, snakes are bred and sera are made which furnish revenue to the institution. The sera are depended upon by the inhabitants of Brazil and are furnished to all civilized countries to save them from the fatal effects of bites from venomous snakes. The institution is commodiously housed in several imposing buildings and is well manned by scientists who are instructors to a considerable class of students. In fenced-in enclosures there is a great variety of reptiles of all sizes, all shapes and dispositions. These enclosures are presided over by attendants who in addition to their ordinary apparel wear thick shoes, leather leggings and gauntlets, and who use as their batons sticks an inch in diameter and several feet long, with a blunt hook in the end of each. The spectator stands outside of the closely woven wire fence and looks on in perfect safety while the attendant irritates the great reptiles with the hook end of his baton, dragging them out of their beehive-like houses and tantalizing them to show fight. In one enclosure there were large trees in which the attendant would stir up some knob-like mass on a limb above him, hook up a great, struggling reptile and skillfully bring him to the earth. It is a creepy business, and by the time we left this institution nearly everybody was on the verge of delirium tremens.

In the laboratory in which the sera are made the work of the institution was demonstrated to us and we gained a notion of how familiarly the laboratory workers associate with their victims. Nearby was a pharmaceutical laboratory where quinine and other alkaloids and Brazilian drugs are prepared and tested.

Dr. B. Montenegro—The Committee

IN the afternoon I was summoned to the office of the hotel to meet a caller, Dr. B. Montenegro. He proved to be a most cultured and charming man who spoke English perfectly and who had received his medical education in the United States, having graduated from the Medical Department of the University of Pennsylvania. He is a member of the Faculty of Medicine and one of the surgeons of São Paulo, and came as the spokesman of two committees that had been appointed by the Faculty of Medicine to look after our interests, one a committee on entertainment and the other a committee of surgeons to consider affiliation with the American College of Surgeons.



SNAKE HIVES AT INSTITUTO BUTANTAN

Dr. Montenegro cleared the mystery of the one-sided correspondence. Dr. Carvalho, the former Director of the Faculty to whom I had sent my letters, had died nine months previously and my letters remained unopened and unread until a few weeks before, when they had been turned over to the Faculty of Medicine by Dr. Carvalho, a young surgeon and the son of the former Director. Then when they endeavored to ascertain the exact time of our visit they were given incorrect information. They were much chagrined to learn that we had been in São Paulo for twenty-four hours without their knowledge. The two committees included the following: J. Alves de Lima, Edmundo Xavier (Medical Director of the Faculty), Raul Briquet, Jose Ayres Netto, Moraes Barros, Antonio Candido de Camargo, Sergio Meira Filho, Lauriston Job Lane, B. Montenegro, Walther Seng, Enjolras Vampré (President of the Medical Society), Mario Gatti, Henrique Lindenberg (oto-rhino-laryngologist), Luiz de Rezende Puech (orthopedist).

A program had been prepared. At first they were anxious to have us perform several operations. This we firmly but politely declined to do, urging the soundness of the rule established by the Mayos, *viz.*, except in a great emergency, no surgeon should operate outside of the environment of his own operating room. However, we impressed upon the committee our desire to see the local surgeons at work, and to learn as much as possible of their general methods.

Selecting a Professor of Gynecology

AS guests of the Faculty of Medicine we attended an unusual function that had been in process for several weeks—the selection of a professor of gynecology to succeed Dr. Carvalho, deceased. There were five contestants, all well-known surgeons and teachers. The scene that we were invited to witness occurred in a large amphitheater which opened upon a large plaza. Through the door of the anteroom we could see the audience of three hundred physicians and surgeons of the city who desired to witness the contest and await the result. The members of the Faculty, with Dr. Watkins and myself as guests, filed onto the platform at one end of the room and received an enthusiastic welcome. In the center of the arena between the audience and the Faculty, in a space about ten feet square, were two chairs and a small table on which were a thermos jug of water and a drinking glass. The Director of the Faculty presided. From a strong box, which was unlocked by the Secretary in the presence of the Faculty and the audience, were taken five large

envelopes, each elaborately sealed. The seal of one of the envelopes was broken and a name was read. A tall, full-bearded, keen-eyed, rather pale man about forty years of age came forward and received the manuscript. He passed to the table in hushed silence, poured a glass of water, moistened his lips, and then bowed to the Director, the members of the Faculty, and the audience. In the meantime, another distinguished looking man had taken the chair at his right. Then the princi-



VIADUCT AND SÃO JOSÉ THEATER, SÃO PAULO

pal actor scanned the faces of the members of the Faculty and, remaining seated, began to read his thesis. Two weeks before, he, with the four other contestants, had been given twenty-four hours in which to prepare in his own hand-writing a thesis on the subject of pelvic peritonitis in women, the subject being announced at the time. These theses were then sealed, and today each individual in turn was to read his thesis.

The first man to read was checked by one of the contestants, to guard against unfair interpolation on the part of the reader, as it was necessary that the thesis be read as it was written. The other principal tests of the contest were: A one-hour lecture before the Faculty and a public audience on some phase of gynecology, the subject being announced after the contestant



MUNICIPAL THEATER, SÃO PAULO

mounted the platform, with the privilege of illustrating by chalk drawings, improvised as the speaker proceeded; an outline of the study, diagnosis, and operative treatment of a case, worked out under the surveillance of the committee.

Soon our speaker on this occasion was in the midst of his reading, and his entire being was engaged in the effort. He was deliberate, emphatic, and mightily impressive. He undoubtedly had some of the qualifications of an orator as he was able on several occasions to command applause, and several times laughter. But he was thoroughly in earnest, and his diction was so deliberate and direct that Dr. Watkins and I could gain a considerable notion of his argument, although we could not understand a word of his Portuguese. He finished with a dramatic, appealing climax, which brought a round of applause that lasted for several seconds. We were about ready to vote "yes" on this candidate because of the general impression we had gained from his artistic presentation.

Then the one who occupied chair number two received his manuscript, and another candidate succeeded him in the capacity of checker, and the second paper was read. This candidate was a strong, practical man, and he proceeded, apparently under considerable suppressed excitement, to read his produc-

tion in an undramatic, business-like manner. At the end he was greeted by applause, but less enthusiastic than the first. As he was lost in the audience, the man who had been verifying his manuscript stepped forward and received his thesis. As he did so there was an outbreak of enthusiastic applause from the audience and some members of the Faculty. The candidate was a large, strong, clean-shaven man with an intellectual face, and a dignity and poise that augured ill for the other candidates. His thesis, which he read quietly, was enunciated with force, and his arguments were apparently sound. He commanded the attention of the entire audience, including those who did not understand his language. When he finished, there was an outbreak of applause that lasted several minutes. Many people from the audience rushed forward and offered congratulations which he received with perfect poise. The whole impression made by this man was most favorable.

The remaining theses were read by the two other candidates and the contest was finished. The meeting adjourned, and the committee (one member of which was our guide, Dr. Montenegro) retired. It was announced the next day that the third contestant, Dr. Moraes Barros, had been elected as Professor



CATHOLIC CATHEDRAL, SÃO PAULO



DR. J. ALVES DE LIMA
Medical Director of the Faculty, São Paulo

of Gynecology in the São Paulo University, to succeed Dr. Carvalho, deceased.

Dr. Watkins made the following comment on the selection of a professor: "The medical school was established in 1914, and is doing very good work. We witnessed the closing session of a concourse for the chair of gynecology. Five men participated. It consisted in lecturing and writing upon assigned subjects without preparation. The contestants were expected to consume the entire time and to complete the subject, one hour being assigned for the lecture and two hours for writing. It involved three weeks of rather bitter intrigue and strife. It is a custom in the medical school of Brazil. The graduation thesis is still used. The theses are printed and bound (often well illustrated) at the expense of about $100 each to the school. Each student is assigned time to read and defend his or her thesis in public to two or three members of the faculty. We were present when a woman was doing this with much vigor, self composure, and ability (apparently), as it was done in Portuguese."

WHILE driving back to our hotel, we were invited to attend, on the following evening, a meeting of the Medical Society of São Paulo, after which there was to be a meeting of the committee which was to discuss the American College of Surgeons.

Dr. J. Alves de Lima — Municipal Hospital

MARCH 15. At 8:30 in the morning Dr. Montenegro took us to inspect the municipal hospital and to see some operating. This hospital is one of the teaching institutions connected with the University. The building is large and substantial, with high-ceilinged rooms and an abundance of large windows. Around it is a park-like garden filled with trees, shrubs, and flowers, and in the center is a large patio with a playing fountain. The facilities for the care of municipal patients are not sufficient. The hospital is built to accommodate five hundred patients, but at the time of our visit it contained nine hundred. Each of the five hundred beds had an occupant and at the foot of practically every bed, in a broad aisle, was a mattress on which there was another patient.

We were introduced to many surgeons, physicians, and attendants. One of the surgeons was Dr. J. Alves de Lima. Dr. Lima strikes one immediately as a man of distinction. He is of the true Portuguese type, about forty-five years of age,

and at that time bewhiskered as are many of their distinguished men. He has the appearance of a student, tempered by a thorough knowledge of the practical world. He speaks and reads English with facility.

He was preparing to do a gastro-enterostomy for what he called an inflammatory obstruction of the pylorus. His records were elaborate, and the case had been painstakingly and conscientiously worked out. The records were translated for us, and we inspected the X-ray plates. The operating room, one of several, was large, with a skylight and sidelights, and with sterilizing rooms equipped with the latest apparatus. He operated with one assistant who aided him in handling instruments, and there was one additional attendant who handed to him sealed packages of supplies. The chloroform anæsthetic was given by a physician.

The operation was skillfully performed, with a technique that one sees in Paris where trained nurses are not available. The pathology demonstrated what appeared to be an inflammatory thickening about the seat of an old ulcer. The gastro-enterostomy was done with Mayo clamps, exactly as one has many times seen it done by the operators of the Mayo Clinic. His conduct of the case demonstrated that he is a surgeon of ability, and his technique is equal to that of the best surgeons of the world.

Dr. Luiz de Rezende Puech

WE then inspected a pavilion devoted to orthopedic surgery and met its chief, Dr. Luiz de Rezende Puech. He is a genius and, like all men of that type, is an enthusiast. While knowing little of orthopedics, we were fascinated by this man who is a devoted slave to his work. As we passed through his crowded wards the patients, cripples of all forms, among them many children, fairly clung to him because of their love for him. In several places in his pavilion two children occupied one bed, and there were also many children on mattresses on the floor. This distressing condition of overcrowding is well recognized by the authorities and a definite effort is being inaugurated to remedy it. The large foundation of a new building, which will greatly increase the capacity of the hospital when its superstructure is built, was pointed out to us. However, work on this building had been temporarily abandoned because of the present high cost of production.

Automobile Club — Dr. Raul Briquet

WE lunched, or "breakfasted," at the Automobile Club with a group of physicians, including Dr. Montenegro and Dr. de Lima. In the afternoon we inspected the maternity hospital, a pay and charity institution which is under the direction of Dr. Raul Briquet. The hospital accommodates from 80 to 100 maternity patients, and Dr. Briquet does the operating that develops from such cases. The building occupies a site in the residence section of the city, and overlooks the city proper



AUTOMOBILE CLUB, SÃO PAULO

which lies in the valley below. The private room and ward accommodations are very attractive, and midwives and students of medicine are admitted for instruction.

Dr. Watkins Appears as Orator — São Paulo Medical Society

IN advance I learned that the meeting of the São Paulo Medical Society for that evening was to be a short one, with but one paper scheduled. Therefore, I suggested to Dr. Montenegro (and the suggestion was received with enthusiasm) that Dr. Watkins be asked to show some lantern-slide illus-

trations of his operation for prolapse, and Dr. Watkins consented to give a short demonstration.

The society met in the assembly amphitheater of the Policlinic, which has a library and reading room, and is the gathering place for the medical profession of São Paulo. It occupies at least two upper floors of a pretentious building in the business section of the town. Dr. Watkins and I were the guests of the society. Dr. Montenegro was made the official interpreter, and to him fell the task of reading to us an address of welcome in English. To this I replied, followed by Dr. Watkins, expressing our thanks for the reception which had been accorded to us and our appreciation of their medical institutions.

The president of the society, Dr. Enjolras Vampré, honored us by making us corresponding members of the medical society of São Paulo. Dr. Watkins then presented his slides and explained briefly their purport. His efforts were received with genuine enthusiasm, and several of the gynecologists present were evidently familiar with his work. After a brief report of a case, presented by a member of the society, adjournment was in order, and we stepped into the library, where we drank black coffee and were presented to the members of the society.

Organization of Committee on Credentials of the College

LATER we went to the Director's room where the committee that was selected to meet us as officials of the American College of Surgeons had gathered to consider our proposition. This committee was very sympathetic to the College, and they had already decided to co-operate in every way possible. Finding them in accord with our suggestion, in the name of our Regents I asked them to organize themselves into a Committee on Credentials for São Paulo and the portion of Brazil south of them. I suggested that their committee consist of seven surgeons who were eligible for Fellowship in the College and that they elect a Chairman and a Secretary. The committee, five members of which were present, was authorized as follows: J. Alves de Lima (general surgeon), Chairman; B. Montenegro (general surgeon), Secretary; Antonio Candido de Camargo (surgeon); Sergio Meira Filho (surgeon); Henrique Lindenberg (oto-rhino-laryngologist); Luiz de Rezende Puech (orthopedist), and Moraes Barros (gynecologist). This committee promised to hold a meeting and recommend several other

candidates for our consideration. The work of this night augurs well for the beginning of an enduring friendship between the surgeons of Brazil and the surgeons of North America.

Government Coffee Plantation, Campiñas

MARCH 16. We took a train and after a two hours' ride through the hills and valleys of the State of São Paulo visited a typical coffee district at Campiñas, where we inspected a coffee plantation belonging to the government. We lunched



GOVERNMENT COFFEE PLANTATION, CAMPIÑAS

in a shady glen in a public park. Here in the out-of-doors, under an arch of thickest foliage, we showed our appreciation of food and drink. Dr. Montenegro, who had come with us as our guest, explained to us the method of growing and harvesting coffee. He is familiar with that industry, having been born and brought up in a coffee district two hours farther inland.

Banquet at the Automobile Club

IN the evening, Dr. Watkins and I were the guests at a banquet given in our honor by the medical men of São Paulo at the Automobile Club. The setting was one of the most

beautiful I have ever seen. The table which was laid in the banquet hall was in the form of a horse-shoe with a wealth of flowers that was bewildering.

The São Paulo Automobile Club is about the last word in clubs, being famous for its luxurious appointments, the scope of its entertaining capacity, its restaurant, libraries, card rooms, reading rooms, café, roulette rooms, and ladies' restaurant—all equipped in the most exquisite taste and without regard to expenditure.

Dr. Edmundo Zavier, a distinguished internist of Brazil who speaks a little English, presided at the feast. He is very anxious to visit the United States for the purpose of studying our medical schools and especially our method of teaching internal medicine. At the proper time, Dr. de Lima read an address in English to the guests. He was followed by a young man, Dr. Paula Souza, who also read an address in English. Dr. Souza is connected with the school of hygiene which, I believe, is in some way fathered by the Rockefeller Institute. The two Americans did their best in their speeches to show their gratitude for the many courtesies which they, as strangers, had received from their new-found friends of Brazil. We North Americans can only admire, receive, and beg them to come to us so that we may bind more closely the ties of friendship.

Sanatorio Sta. Catharina

MARCH 17. Visited the Sanatorio Sta. Catharina, where we witnessed an operation by Dr. Walther Seng, one of our hosts of the evening before. Dr. Seng, while a Brazilian, is a German in appearance and training. His operation consisted of an excision of the pyloric end of the stomach for an inflammatory obstruction, with closure of the duodenal end, and anastomosis of the jejunum to a portion of the stomach closure. This hospital is conducted by a congregation of German Sisters, has a capacity of 125 beds, and is open to all operators.

Later in the morning we made a short inspection of the Instituto Paulista which has three services—a surgical, a medical, and a separate department of 125 beds for mental diseases. It occupies a beautiful site, its buildings are large and its grounds commodious and beautiful. The hospitals here, like those we had visited in other cities of South America, are open to two principal criticisms by the surgeons of North America: first, the lack of adequate training schools for nurses; and, second, the lack of screens for the windows of their wards, operating rooms, and private rooms.

At one o'clock, after a long morning, and for the last time on this trip, we again lunched with our friends at the Automobile Club. Then we packed our trunks, and at nine o'clock in the evening Dr. Seng called and conveyed us to the railroad station, where our train stood ready to start for Rio de Janeiro. Many of the members of the Faculty of Medicine, some of them with their wives, were there to see us off. Our compartment was filled with flowers and we were overwhelmed by the cordial, warm-hearted adieus of our delightful friends. Before leaving, Dr. Montenegro handed me the applications for Fellowship in the College of the seven members of the committee, and informed me that they had selected thirteen others, who would be recommended for Fellowship, and whose applications would be sent to me later.

RIO DE JANEIRO

MARCH 18. The light of day came, and knowing that we were soon to descend from our three-thousand-foot altitude to the sea level through a mountainous country we were ready to take our early coffee and be transferred to a comfortable observation coach. We followed a river one hundred feet wide, and at frequent intervals dashed through small cities and hamlets that showed prosperity and resembled towns of the same size in France—except that here there is a much richer growth of foliage. At five o'clock in the morning a group of men were at work in a field, cultivating some crop. The midday heat seems to bring out the workers of the day in the cool hours of the early morning and at the twilight hour of the afternoon.

We began to pick our way through rugged hills along a circuitous route and were soon in more distinctly mountainous country. The scene became more interesting and beautiful as we dropped from one fertile tropical valley into another. Later we caught glimpses of the ocean with an abundance of the same dome-topped mountains that we had noted before. Finally the five distinct finger-like mountains called the "Fingers of God" appeared, indicating that we were approaching Rio de Janeiro. The suburban towns multiplied and became more important. For long distances we ran beside stretches of beautiful roads which were lined on either side by the most decorative tree of all—the stately royal palm, until at last we found ourselves in the real city.



BOTAFOGO BAY, SUGAR LOAF, AND COPACABANA

Reception Committee

IN the confusion of arriving at the station, it was announced to us that a committee of doctors was there to greet us. We met and were introduced to Dr. Aloysio de Castro, Dr. Oscar Clark, Dr. José de Mendonça, and Dr. Olympia da Fonseca. Dr. Clark, who speaks good English, became the spokesman. They had two automobiles in which to drive us to our hotel. All members of the committee spoke a little English, but, with the exception of Dr. Clark, it was apparent that Mrs. Martin's French was more acceptable and understandable than our English.

Dr. Clark, an internist, a graduate of the University of Pennsylvania, an enthusiastic, energetic man about thirty-five years of age, apparently was to be our official host and adviser. At four o'clock he came with his automobile and took Dr. Watkins and me for a ride. It was a well chosen itinerary as it gave us at the outset a definite bird's-eye view of Rio de Janeiro. We skirted the sea-front boulevard and had a splendid view of the land-locked bay and harbor; of Sugar Loaf, the famous guardian island-mountain; of Corcovado, the lookout mountain; while in every direction other landmarks

were pointed out, the names of which at that time meant nothing to us, but the realities of which filled us with wonder. At the end of the bay boulevard, where all seemed to end in a mountain pass, we suddenly penetrated the mountain by tunnel and came out into sunshine and beauty on the ocean front. Here was a small city of beautiful residences overlooking a half circular beach of whitest sand, where surf was rolling in in mountainous waves. Above the beach was a boulevard of asphalt with a protecting wall, and bordering that a row of palatial summer homes. One end of this beach and boulevard, carrying the unpronounceable name of Copacabana, is terminated by the mountains guarding the bay, and at the southern and eastern end by a point of land on which is an important fortification. At this farther end, the boulevard continues through an opening in the town and enters upon another boulevard that follows the ocean in another curved beach that runs almost at right angles to Copacabana and terminates two miles farther on at another mountain promontory which projects into the ocean. On this beach, called Ipanema, are located the American Country Club and some very attractive homes. To the landward side by this beach, extending almost to the boulevard that skirts it, is a beautiful fresh-water lake of three or four square miles.



AMERICAN COUNTRY CLUB



DR. ALOYSIO DE CASTRO
Director, Faculty of Medicine, Rio de Janeiro

Our ride on the sea-shore on this occasion ended at the mountain end of the beach, and we returned to the city by passing around the rear of the fresh-water lake and entering Rio de Janeiro through one of the mountain passes that gave us a glimpse of pretentious homes. Finally we passed the old palace which formerly housed the Emperors of Brazil and drove down a famous lane of royal palms which extends to the main approach to the palace. Our ride ended at the bay boulevard, Botafogo. We had received a wonderful impression of a city that has a hundred attractions, each one of which one is desirous of knowing in detail. Our guide was one whom we could follow with confidence and with enthusiasm.

March 19. The weather, which we expected to be extremely warm, surprised us by its coolness and by the delightful sea breeze.

Dr. Bowman C. Crowell, an eminent American pathologist stationed at the Oswaldo Cruz Institute, called and during our conversation gave us valuable information about the institutions of Rio de Janeiro. At eleven o'clock I paid my respects to our Ambassador, Mr. Edwin V. Morgan.

The Faculty of Medicine

AT one o'clock Dr. Clark came and took Dr. Watkins and me to the Faculty of Medicine. There we were met by Dr. Aloysio de Castro, the Director of the Faculty, and under his guidance thoroughly inspected the medical school plant. Dr. de Castro, a young man under forty, a neurologist by specialty, during the four years after the beginning of the European war planned and superintended the construction of this building which must be one of the most complete and comprehensive that exists. It is a large, square, two story structure of stone and stucco, having at least a six-hundred-foot frontage. Upon exploring its main entrance, one soon finds himself in a large central patio with a concrete floor. From this court, through large doorways appearing like imposing colonnades, one may enter the dozen or more complete and separate departments of the College, each with its individual equipment. The second floor is reached by a stairway which leads to a broad balcony that overlooks the court. The class-rooms are large and attractive, the ceilings are high, and each department has its own teaching amphitheater with comfortable chairs and mahogany desks for the students. There are motion picture cabinets, projectoscopes, and a broad



FACULTY OF MEDICINE; CORCOVADO MOUNTAIN IN THE BACKGROUND

demonstration platform where every facility is provided for illustrating and demonstrating each particular subject.

The laboratories are new and are equipped with the very latest devices. Each teacher of a theoretical subject has his own separate headquarters, with a comfortable office and an exclusive apartment where he may gain seclusion.

There is an attractive assembly room for the accommodation of the students, the Faculty, and the Director. This room is used for convocations and on other important occasions. At one end of the room is a broad dais flanked at right angles by three tiers of seats, each row of seats having in front of it a large continuous desk. This slightly elevated platform is for the seating of the Director, the Faculty, and other distinguished personages. Its general contour is like a horse-shoe whose ends open into a broad room where the audience is seated and which in turn opens through a colonnade onto the central patio of the whole building.

The medical school occupies a beautiful site under the brow of a mountain at the extreme southern end of the bay. It

faces the bay, reserving on its side next the water, and under the shadow of Sugar Loaf, a splendid location for the contemplated and much needed clinical hospital. There is a sufficient reserved space to the south of the main building to accommodate an anatomical building and leave plenty of room for future expansion.

Through the great open windows of one of the recitation rooms, with its polished mahogany seats and attractive equipment, we could see the mountains and the shipping of the bay. One of us remarked to the Director that he must have had an eye to the artistic environment in the construction of his workhouse. "Yes," he explained, "one can do more inspiring and more interesting teaching if his surroundings are attractive and satisfying."

Returning to the hotel we met Dr. de Mendonça who called with his wife and daughters, accompanied by Dr. Clark, his son-in-law. Dr. de Mendonça is practically Dean of Surgery in Rio de Janeiro, having had a long and distinguished career. He and Dr. Clark went over with me for the first time the list of the surgeons of Rio de Janeiro, and informed me that a committee of five surgeons had been appointed by the Director of the Faculty, Dr. de Castro, to act as my advisers in regard to the American College of Surgeons. Then, that we might be prepared to enjoy the city to our full, they took us to



AVENIDA RIO BRANCO, MONROE PALACE IN THE DISTANCE

witness a motion picture film that had been taken from an aeroplane. It was a wonderful production, and under the guidance of our friends we received an impression of beautiful Rio de Janeiro that we could never have gotten in any other way.

As we sat on the roof garden of our hotel that evening in a flood of moonlight, with a delightful summer temperature, with the city lights all around us, it began to dawn upon us that the extravagant things that we had heard about this southern paradise were attempts to describe the indescribable.

The Bay

MARCH 20. In a comfortable steam launch we made a trip on the bay, out by Sugar Loaf to the south, east to the entrance to the harbor, and along the sentinel islands that separate the Atlantic Ocean from the bay. We traversed the shore line to the north until nearly the entire bay had been circumnavigated. From our launch we could get a perspective of the city with its irregular water line, its docks, its projections and indentations, its mountain background, its hills, and its characteristic buildings of many colors. It rained during a part of our excursion, but that only emphasized the greenness



AVENIDA BEIRA-MAR



OSWALDO CRUZ INSTITUTE

of the foliage which is so rich everywhere, and added to the mystery of the many valleys, and coves of the shore line. We returned to the city at three o'clock. It was Palm Sunday, and in all of our lives we had never known a day that was more appropriately named.

Oswaldo Cruz Institute—Dr. Carlos Chagas*
Dr. Bowman C. Crowell—Dr. Adolph Lutz

MARCH 21. The equinox. Rain in a downpour from early morning until nine o'clock in the evening. As yet we had not experienced any very warm weather. In the early morning, Dr. Crowell of the Oswaldo Cruz Institute, and Dr. Clark called and carried us off to inspect the Institute, named for their Gorgas—Dr. Oswaldo Cruz. We drove in two cars to the north end of the city where on an elevation near the sea is the principal structure of this institution, the experimental laboratory, a very ornate building four stories in height and of Moorish construction. The Institute was founded in 1899 by Oswaldo Cruz, who was the pioneer in cleaning up Rio de

*Under the hostage of the Rockefeller Foundation, Dr. Chagas, with his brilliant son, visited many cities of the United States in the summer of 1921. He demonstrated his theories, and was received with great enthusiasm by the profession of our country.



DR. OSWALDO CRUZ (deceased)
Founder of the Oswaldo Cruz Institute

Janeiro and later other outlying portions of Brazil. He eradicated yellow fever and the plague by following the principles which had been put into practice by our own Gorgas in Cuba and Panama. The President of the Brazilian Republic, who was skeptical concerning Cruz' ability to carry out his promise to eradicate yellow fever from Rio de Janeiro in one year, said to him: "How can I be sure, after all the expenditure of money that will be necessary, that you will be successful in accomplishing this miraculous feat?" The enthusiastic scientist replied: "If I do not succeed, you may behead me." Within the year yellow fever was stamped out, and from that time to this Rio de Janeiro has been one of the most wholesome cities in the world. Oswaldo Cruz, who died several years ago at the age of forty-four, is a national hero. One of the most attractive boulevards of the city is the Avenida Oswaldo Cruz, and in many places may be seen portraits and busts commemorating him.

The Institute which now bears his name was planned and built by him, the government contributing toward its construction and maintenance. The government now appropriates one-third of the expense of its up-keep. Thirty medical men, pathologists, curators, and other scientists, are engaged in the work of the Institute. It is a great experimental center for study and teaching in connection with tropical diseases. At the head of it at present is the distinguished Dr. Carlos Chagas, the discoverer of the tropical disease popularly known as the Chagas disease. Dr. Chagas, while in the interior studying malaria, noticed an incurable disease which was characterized by enlarged glands, anæmia, and final death. As it did not come under the head of malaria he decided that it was caused by some form of blood infection and probably from some parasite imparted by the bite of an insect. Finally, by untiring observation, he discovered that the disease was caused by the bite of a beetle-like bug which thrived in hot, unhygienic surroundings where people sleep, and which pursued its work in the early hours of the morning. It deposits a parasite or organism which Chagas has isolated and demonstrated to be the cause of the disease. The individual having the disease shows the parasite in his blood, saliva, and tissues.

We were shown through the Institute in a preliminary way by Dr. Crowell. On the arrival of Dr. Chagas, he took us in charge. He is a man of medium size, with a fine, long head, and dark complexion, who at once, from his frank, direct manner, ingratiates himself into one's being as a friend.



DR. CARLOS CHAGAS
Director of the Oswaldo Cruz Institute

Another interesting head of a department of the Institute is Dr. Adolph Lutz, who is in charge of the work of preparing prophylactic and curative sera. His daughter, an attractive girl who speaks our language, is his assistant. Dr. Lutz is a serious-faced, apparently overworked man, an enthusiastic scientist, devoted to his work, and who, I suspected, thought: "What do all of these ignoramuses know about this intricate subject?" However, I want him to know that we were much impressed by his strong personality and his very interesting exhibit.

The day was a red letter day for us and furnished one more thing to make us humble. How proud we all would be if such an Institute as this could be built as the first experimental unit of an international school in Panama for the study and teaching of tropical diseases, liberally constructed and endowed, and known as the Gorgas School of Tropical Medicine!

Dr. Watkins' Comments on the Oswaldo Cruz Institute

"OSWALDO CRUZ—doctor, sanitarian and health commissioner—freed Rio de Janeiro of yellow fever in six months' time. He was a man of large mind, keen scientific interest, and of great industry, who accomplished much and died an old man at the age of forty-four, a patriot and a martyr to his country. He also planned and induced his country to build the Oswaldo Cruz Institute. It is a large, architecturally beautiful, marvellously arranged and excellently equipped institute for research study of tropical diseases. It is under the direction of his pupil and friend, Dr. Carlos Chagas, who identified and completely established Chagas' disease, identifying the germ, the host, and reproducing the disease in animals. Dr. Chagas recently made a visit to the States under the direction of the Rockefeller Foundation. The institute is developing an excellent pathological department under the direction of Dr. Bowman C. Crowell of the Rockefeller Foundation. Dr. Crowell has had an extensive experience with tropical diseases in the Philippines and is remarkably well adapted personally and otherwise to the work. The necessity for such work is well illustrated by the practice of Dr. Alvaro Ramos, one of the leading surgeons of Rio de Janeiro, who for years sent all of his pathological tissue to Muenich for diagnosis at the expense of 60 marks for each specimen. Now Dr. Ramos and many of the other surgeons send all of their pathological tissue to the Oswaldo Cruz Institute, which has established a real school of pathology."



SUGAR LOAF TO THE LEFT
SANTA THEREZA HILL TO THE RIGHT

AFTER leaving the Institute, Dr. Clark drove us back to the city and incidentally made a detour that gave us for the first time a view of the elaborate docking facilities that the government has constructed in improving its harbor. The docks are modern, with elaborate machinery for loading and unloading and great storage warehouses flanked by a broad, well-paved drive or approach that will extend for miles along the coast.

We then drove to the American Embassy where I had an appointment with Mr. Morgan, our Ambassador. He invited us, with our wives, to luncheon with him at his summer residence in Petropolis at which time he was endeavoring to arrange for me an audience with the President of Brazil, who also has his summer palace in Petropolis. I found Mr. Morgan sympathetic to the Gorgas memorial plan, as he, like all Brazilian residents, had seen a practical demonstration of the application of the principles employed by Gorgas in stamping out tropical diseases.

March 22. Day of rest. Took long beach drive with the ladies. Temperature remains delightful—today about 75° F. In fact, in this first week we have had none of the oppressive heat that we experience in our northern summers.

Sugar Loaf Mountain (Pão d'Assucar)

MARCH 23. Took automobiles to the entrance gate for the ride to Sugar Loaf, a conical-shaped mountain which towers over the bay. The trip to its summit is made in two stages, from the base to a companion mountain, about two-thirds the height of Sugar Loaf, called Penedo da Urca, where one disembarks, traverses the top of this way-station, and takes the long, final trip to the top of the real mountain. The vehicle of transportation is a small basket-like car, accommodating twenty passengers, which is suspended in midair on huge cables, and on them carried from one mountain height to the other. Viewed from a distance this aerial flight appears as a very perilous undertaking; but the reality furnishes a novel but unterrifying experience. When we reached our first station, we were concerned to see the higher second peak covered by a cloud. As we proceeded, however, it disappeared, and we were rewarded by a sunlit view of the bay, the city, the amphitheater-like mountains back of the city, and the great ocean



BASKET-CAR TO SUGAR LOAF

to the east and south. A view from above of the tropical jungle that lies between the two mountains is a most interesting sight. It has a beauty of color, and a feathery-like softness of appearance that fairly tempts one to jump into it.

In the evening our courteous friend, Dr. Clark, took us with our wives for a drive. He pursued, at the beginning, the same route that we had taken on the day of our arrival—the shore boulevard, through the tunnel to Copacabana, with its circular beach, along the beach at Ipanema, past the Country Club, to the terminus on the south at the mountain-like promontory projecting into the sea. Here we found that this wonderful boulevard continues for many miles on the sides of the cliffs bordering the ocean. This road is lighted by electricity and is a great engineering accomplishment. Presently the real object of our ride was revealed. We were asked to look back from the heights. There below us were the two wonderful beaches, stretching for miles, with the white foam of the surf gleaming on the broad stretch of sand. The skirting boulevard was made conspicuous by the great string of electric lights which transformed the whole scene into fairyland and gave to it the appearance of necklaces of gold and jewels. We feasted

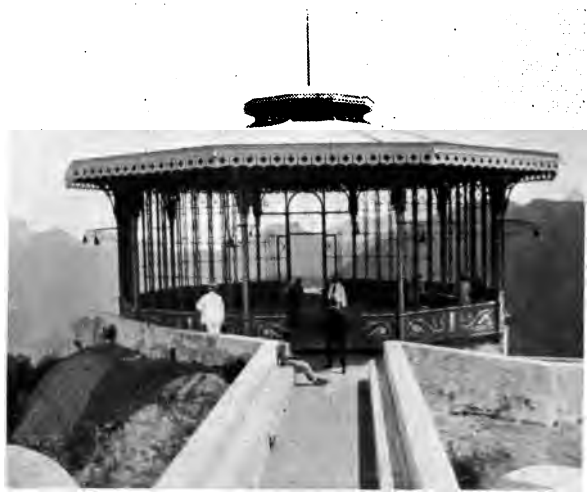


CORCOVADO TO THE LEFT, RODRIGO LAKE TO THE RIGHT

upon this ever-changing scene as we retraced our mountain road and wondered if we had ever before seen anything so beautiful.

Corcovado — Paineiras — The Aqueduct

MARCH 24. This day we visited Corcovado. The mountain is reached by cog railroad and has on its peak a pavilion which overlooks the city and surroundings. From this vantage point one gets not only a superb bird's-eye view of the bay of Rio de Janeiro and of the city itself, but of its relation to the surrounding country, its several summer suburbs with their extensive ocean beaches, and also of the mountain landmarks among which this is one of the most conspicuous. On arriving at the summit this day, we were enveloped in a dense cloud. Our disappointment was reaching the point of despair when slowly, as through the screen of the cinematograph, away below us we discerned in the brilliant sunlight the ocean beaches of Copacabana and Ipanema. Turning we had a faint view of the city proper and its bay and shipping. Then a cloud enveloped us and the view disappeared. This was repeated several times, and finally the view was shut out not to be again revealed.



PAVILION AT TOP OF CORCOVADO



FOUNTAIN, ORIGINALLY SOURCE OF WATER SUPPLY IN RIO DE JANEIRO

The ride down the mountain side through its tunnel of green jungle, with the many glimpses one received of the valleys below, was as pleasing as the complete view to be had from the height on a clear day. Nowhere about Rio de Janeiro can one view the jungle to as good advantage as on this ride. Here are depths and heights and the impenetrable tropical tangle undisturbed. Here are the purple and the yellow trees, the masses of vines and shrubs, the songs of birds, the high note of the many insects, and often against the green of the mountain the wonderful butterflies.

Part way down the mountain we emerged into the sunlight with clouds and shadows of clouds around us, and stopped at Paineiras, a halting place, where a station and a restaurant mark the route of an ancient aqueduct that was built three hundred years ago to furnish water for Rio de Janeiro. The aqueduct is constructed of solid masonry and now, after three hundred years, is in perfect repair with a stream of pure mountain water flowing swiftly in the trough at its top. Paralleling the duct is a level path that one can follow for miles along the mountain side. It is buried under an arch of green, but at intervals openings between the foliage enable the pedestrian following its meanderings to get charming glimpses of the valley below. Many times in the seclusion of this place highly colored

paroquets and sporting monkeys appear, although we were not fortunate enough on this occasion to see these signs of the real jungle. However, one cannot walk by this ancient work in the cool shade and listen to the song of its running water without being fascinated with it all. In this place, and in the mood of the tropical jungle, we lunched and satisfied the hunger of the body.

Santa Thereza Hill—São Silvestre

MARCH 25. Passed a quiet day that was utilized in a ride by tram to the International Hotel, located on Santa Thereza Hill, and on to São Silvestre, a terminal on the Corcovado road. The tram takes one along the route of the old aqueduct which in many places at this height has been destroyed to furnish material for the construction of the road. On the approach to this hill and on its terraces are many of the picturesque homes of the people of Rio de Janeiro. Here, hundreds of feet above the bay, they have beautiful views, stirring cool air, and the silence of the country.



RIO DE JANEIRO FROM CORCOVADO

a most cordial greeting from our host and met several Brazilian friends, including Dr. de Castro and Dr. da Fonseca with their wives, Senhora de Mendonça and her two daughters, the Senhora Clark and Senhorita de Mendonça, also Senhorita Solsa. There was some conversation in French, Portuguese, Spanish and English, and good music. Senhorita de Mendonça played the violin with the skill of a professional. Dr. de Castro asked me if I was fond of music, and upon replying in the affirmative he asked me if I sang or played some instrument. Of course, I had to admit that I had no technical knowledge of music; but in turn I asked him if he was a practical musician. He admitted that he was passionately fond of music, played the piano for his own gratification, but was shy about performing before others. Finally he was prevailed upon to play. This Director of the Faculty of Medicine, a distinguished professor of neurology, modestly proceeded to the piano and with great skill and delicacy of touch played several delightful numbers, including a well-known Chopin Prelude, and excited the envy and admiration of his American auditors.

We inspected Dr. de Mendonça's extensive library of medical and general literature in Portuguese, French, English, and German, all languages which he reads. We drank tea and enjoyed the delightful hospitality of a Brazilian home.

Tijuca

MARCH 28. Tijuca! a name that excites the memory and the imagination of every visitor to Rio de Janeiro. While it is the name of a mountain, it calls to mind a marvellous circular drive through Alto da Bôa Vista, Vista Chineza, Meza de Imperador, Gavea Mountain, the sea cliff road, Leblon, and a return trip by the famous beach boulevards through Leme, Copacabana and Ipanema. At nine o'clock on a beautiful morning like one of our own in June, we started in comfortable motors with reliable guides and chauffeurs to take this drive. No description can do justice to this excursion. In it are packed all of the thrills and panoramas of Rio de Janeiro, a marvel of mountain sides, impassable heights, impenetrable jungles, fascinating bridle paths, and astonishing water falls which seem to come from the very skies, cascades, and bridal veils of mists.

At one point high on the mountain we emerged upon a promontory, and there below us was the many-colored city of Rio de Janeiro, the great harbor, and in a small gap between two island hills the Atlantic Ocean stretching on to Africa.



PUBLIC LIBRARY

The Alleluia

IN the afternoon we explored the city, which is an ever increasing source of pleasure, and in the evening were the observers of a ball at our hotel celebrating the Alleluia. This is an annual event of importance on the eve of Easter Sunday at which time the populace gives vent to rejoicing at the end of Lent. The ball afforded us an opportunity to watch the smart set of the society of Rio de Janeiro, aided by adventurous strangers from all the world, disport themselves in gala array and festive mood. There were many lights, much music, much dining and dancing on the out-of-door roof garden, lasting until the small hours of the morning. Through the eyes of our American young people, the Brazilian style of dancing appeared rather strenuous; but it was evident that the example of numbers prevailed, and before morning they had become apt imitators in the acrobatic struggle.

March 27. Easter Sunday. Clear and cool. Mrs. Martin and I attended the Catholic Cathedral where mass was being said by the Cardinal. The service was most impressive and interesting.

At five o'clock Dr. Clark drove us to the home of his father-in-law, where he himself lives, to take tea. The house is on the Santa Thereza Hill and has an extensive view. We received



DR. JOSÉ DE MENDONÇA
Surgeon, Faculty of Medicine
Rio de Janeiro

where some of us stopped for a plunge in the tank or a frolic in the surf. It was an excursion that left one confused by its many revelations and anxious to spend a lifetime in admiring it in detail.

Organizing a Committee on Credentials

MARCH 29. Attended a meeting at the Jockey Club of the committee appointed by the Director of the Faculty of Medicine, Dr. de Castro, to consider affiliation with the American College of Surgeons. Those present, besides Dr. de Castro and Dr. Clark (both of whom are medical men, the latter being present to act as interpreter), were Dr. José de Mendonça, Dr. Alvaro Ramos, Dr. João Marinho, Dr. Augusto Paulino de Souza, and Dr. José Antonio de Alvan Fialho. After some preliminaries, I explained in detail the purpose of the College of Surgeons and the reasons for our desire to affiliate with the surgeons of Brazil, adding that if our wishes met with their approval, it was our desire that they proceed to organize a Committee on Credentials for the central and northern portion of Brazil, this committee to consist of seven members: surgeons, gynecologists, obstetricians, ophthalmologists, and aurists. I had furnished each member of this preliminary committee with a typewritten copy of the outline of the talk that I expected to make. As they all read English, this prepared them to follow me more intelligently and to be prepared to act. The advances of the College as presented by me were cordially received. They promised to meet and to enlarge this committee to seven, to elect a Chairman and a Secretary, and to bring to me the applications for Fellowship in the College of the members of the committee. The committee also would carefully select an additional group of about fifteen Rio de Janeiro surgeons whom they would recommend for Charter Membership. I also asked them to suggest the names of a few surgeons from Bahia and Pernambuco. The meeting adjourned for coffee after we had accomplished a very satisfactory hour's work under the Chairmanship of Dr. de Castro, and with Dr. Clark as our interpreter.

A Surgeon's Office—Dr. José de Mendonça

MARCH 30. Visited a model medical and surgical office. It was the private workshop of Dr. de Mendonça, the surgeon, and Dr. Clark, the internist. The building, a four-story structure with a pharmacy on the first floor, was constructed on one of the principal business streets for the exclusive use of Dr. de

Mendonça. It contains an elevator and every convenience and modern apparatus for which an up-to-date surgeon and physician could wish, including an X-ray apparatus, a laboratory, and complete record files.

Dr. Watkins' Comments

"WE saw some very good surgery in Rio de Janeiro by Dr. de Mendonça, ably assisted by his son-in-law, Dr. Oscar Clark. Much of their surgery is done under 'block' and infiltration anæsthesia. Dr. de Mendonça is a conscientious, progressive and industrious surgeon. Dr. Clark is a human dynamo, seemingly accelerating as the climatic heat increases."

Early in the morning Dr. Crowell called and I had a long talk with him about the proposed Gorgas Memorial which I hope will take the form of an experimental school in tropical medicine, something along the lines of the Oswaldo Cruz Institute in which Dr. Crowell is the advisor in pathology. Dr. Crowell has spent several years in the Philippines studying tropical diseases. He speaks Spanish, and during the short time he has been in Rio de Janeiro he has become very proficient in Portuguese. He is much interested in our scheme, and has promised to give me his views on the entire proposition.

Sugar Loaf (Pão d'Assucar) at Twilight

MARCH 31. Visited Sugar Loaf (Pão d'Assucar) at twilight to see the sunset and the lighting of the city and bay. The sun sank in the west behind a curtain of mountains and a bank of clouds and sent a parting glory of yellow and red high into the heavens. All about us were the city, the bay, the mountains, the beaches, and to the east the Ocean. The colors rapidly disappeared in the tropical twilight, and, indistinctly at first, appeared the lights of the city. Then rows on rows of lights, like ropes of diamonds, were flashed on, and the picture was a map outlined in gold. Ships sent out their beacons, and far away at sea light-houses flashed their signals to the night traveler on the deep. And everywhere the picture was duplicated in the waters. We quietly watched these changes, wrought by man, and the eternal lights that dotted the heavens above us.

Opening of the Faculty of Medicine

APRIL 1. At one o'clock Dr. Watkins, Mrs. Martin and I went to the Faculty of Medicine to attend the opening of the school for the year. Dr. Watkins and I had been invited

as honored guests, and we had been notified that we would be expected to respond to an address. We were met at the entrance to the building by Dr. de Castro, the Director of the Faculty, and conducted to his room. There we met the Director of the University, a number of the members of the Faculty, and a Dr. Solomon of Vienna, who was also being honored as a distinguished guest. Senhora de Castro, Frau Solomon, Mrs. Crowell, and Mrs. Martin were the ladies present.



FACULTY AND GUESTS, OPENING OF FACULTY OF MEDICINE

Presently we filed into the large assembly room of the school, and the Faculty and guests were distributed in the seats of the raised dais facing the arena which stretched away to the patio through the open colonnades. The hall was filled with students who gave us a vigorous reception in handclapping and "Oh! Oh's!" as we found our places. The three distinguished guests were seated in front of large desks at the right of the presiding officer, Dr. de Castro, he in turn sitting at the right of the Director of the University. The ladies sat opposite on the left wing of the horseshoe of raised seats. Sitting, Dr. de Castro explained the occasion that had brought us together, and in the course of his remarks our names were repeatedly mentioned. At the end of his remarks, which were applauded at intervals, Dr. Fernando Vaz, a member of the Faculty, arose, and read an address in English directed to the two American guests. At its conclusion we each responded in turn, and of course in

English. My remarks, while made extemporaneously, were along the same general lines as those made by Dr. Watkins. However, I referred to the visit of Dr. Mayo and myself of the year before and to my return visit with Dr. Watkins as follows:

"In 1920, with Doctor Mayo, I was privileged to visit the neighboring countries of South America—Peru, Chile, Argentina, and Uruguay. Again this year, with my colleague, Dr. Watkins, I have visited these same countries, and have been greatly gratified to visit also two great medical centers of Brazil—the largest country in South America.

"In the neighboring countries and in your country we have found medical schools which equal in equipment, in teaching methods and in clinical facilities, those of the United States and Canada, and, what is of more importance, a compulsory course in medicine or from six to seven years instead of the four and five year course required by the countries constituting the balance of the world.

"Here, in the most beautiful city of the world, we have inspected, under the guidance of your honored Director, your new and perfectly equipped medical institution, which now, today, we are so proud to occupy. When I return to you next year I predict that on the beautiful plot of ground across the Avenue there will appear the foundation of a great clinical hospital, and on another a great anatomical building which will be constructed, equipped, and financed by your very efficient government. With this, your palace workshop, and with that your clinical hospital, and with your many hospitals that already furnish you with adequate clinical material, and your great Oswaldo Cruz Institute for the study of tropical diseases, with its distinguished Doctor Chagas, the medical students of Brazil are most fortunate.

"Do you appreciate the responsibility devolving upon the medical profession of Brazil? Do you realize that the Panama Canal could not have been built if it had not been for Gorgas and his sanitarians? Do you realize what a garden spot of the world Brazil will become if for the whole country the same work is done that has been done here in Rio de Janeiro by Oswaldo Cruz, Carlos Chagas, and your group of brilliant sanitarians?

"I extend my congratulations to the students of this university. I congratulate you, the members of the Faculty, in having about you such wonderful facilities for doing your work and such a distinguished body of students. And I congratulate you, our Director, for the magnificent work that you have

performed for the science of medicine in this great country, and for the loyal Faculty and student body that you have collected about you to support you and to encourage you.

"And now, before closing, let me extend a sincere invitation to you all—students, Faculty, and Director—to visit our United States of North America, and in doing this I wish to present the greetings of the medical profession of my country to the medical profession of the United States of South America—*Brazil.*"

Two amusing incidents occurred while we were speaking. During Dr. Watkins' talk, without warning to him, the newspaper photographers exploded a flash-light which went off with a terrific report. Perceptibly he jumped; but the flow of oratory possessed momentum that would not be brooked and it went on. The sound of my strange voice and unknown tongue aroused the well cultivated voice of some mongrel dog that had wandered into the meeting room, and for fully a minute it vied with me, and at one time I thought that the cur was going to win in the contest; but I struck a higher pitch and succeeded in discouraging him in his efforts. Each of us of course received vigorous applause at the end of our talks. It was inspiring to watch the audience of students. As soon as the members of the Faculty were seated the students left their chairs and crowded forward and stood, completely filling the arena in front of the Faculty group. They were a fine, brilliant lot of young men, and they seemed to be keenly interested in the speeches made in an unknown tongue by the guests.

Dr. Marinho made an address in German to Dr. Solomon and he responded at considerable length in French. After a few other formalities we went to an upper room in the building and were served with coffee, ices, and *patisserie*, drank several toasts and then, with the Faculty and the ladies, were duly photographed.

We later drove to our hotel, relieved ourselves of our long-tailed coats and silk hats, and at four o'clock were taken by Dr. de Castro and Dr. Clark for another ride to the wonderful Tijuca. The day was perfect, the afternoon sun making more beautiful the winding roads and bridle paths in the mountain valleys. One can never tire or solve the mysteries of this excursion in the hills. It was particularly delightful to have these new friends as guides and to have them point out the beauties which appealed to them. It is like life, this exploration of these intricate natural beauties, one receives from it according to his tastes, his standpoints, and his ability to appreciate.

APRIL 2. Petropolis. The evening before we had received a telephone message from Mr. Morgan, our American Ambassador, stating that he had arranged an audience for me with the President of Brazil, and inviting me, with Dr. Watkins and the ladies, to luncheon with him at the Embassy in Petropolis; afterwards he would accompany me in my visit to the Executive Mansion. Petropolis is a city of summer homes for the society of Rio de Janeiro and the government officials, including the official home of the President. It is also the site of the summer homes of the various ambassadors to Brazil. It is situated in the mountains, at an altitude of several thousand feet, about two hours out of Rio de Janeiro, and is reached by railroad. For a part of the way the steep climb is made by cog road. The scenery along the way is most interesting and would become world-famed if it had not to compete with the environment of Rio de Janeiro.

On arriving at Petropolis we took a drive about the interesting city. It is peculiar in that it has wide streets through the center of which, dividing them into two roadways, runs an



PRESIDENT'S SUMMER PALACE, PETROPOLIS

open canal thirty to forty feet in width, through which flows pure water from the mountains. These canals are bridged at the street intersections and are bordered with trees.

At 12:30 we arrived at the Ambassador's residence, and were cordially greeted. Mr. Morgan, a charming bachelor about forty-three years of age, has been the Ambassador to Brazil for nine years, having been appointed during President Taft's administration. He is very popular with the Brazilians and they are extremely anxious that he shall remain with them. He seems equally fond of them having learned their language and become one of them. Mrs. Benton, the mother of a Secretary at the Embassy, was hostess this day, and we had an interesting and delightful luncheon.

At two o'clock the Ambassador accompanied me to the "White House," which is located in the grounds adjoining Mr. Morgan's attractive residence. The Secretary to the President, Senhor Estamphila Demoura, is a Brazilian naval officer who during the war was a naval attaché in the Brazilian Embassy at Washington. While in Washington he lived at the Highlands, and knew, admired and loved General Gorgas, who was his neighbor. As my object in visiting the President was



PETROPOLIS, AMERICAN SUMMER EMBASSY AT RIGHT



AMBASSADOR EDWIN V. MORGAN AND GROUP
SUMMER EMBASSY, PETROPOLIS

to interest him in a proposed memorial to General Gorgas, I considered that it presaged well for my mission to have the sympathy of this influential attaché who is so near to the Executive.

Mr. Morgan accompanied me when the President received me. The President rose from his chair which was next to a table at the end of a long room that might have been the cabinet room, greeted us cordially, and conducted us to chairs. He is a man of medium height, bronzed skin, keen, brilliant eyes, dark, bushy hair, and an agreeable and attractive personality. He speaks English fluently. I related my story about the Gorgas memorial, and fortunately was able to illustrate the value of the memorial that I proposed by the example of the Oswaldo Cruz Institute which is supported by his own government, and by the work that the Institute is doing under the directorship of Dr. Chagas. I also took the occasion to congratulate him on his sympathetic support of their Medical

School, and to call his attention to the great need of the school for a clinical hospital. He asked a number of questions, showing a genuine interest in my mission, and was apparently much pleased by my appreciation of their medical institutions.

As we were leaving, he called the Ambassador to him and told him, with apparent elation, that he had just received from President Wilson a personal letter in his own handwriting, thanking him for some expressions of appreciation in regard to Mr. Wilson and his great work that he had uttered in an interview. President Epitacio Pessôa was the Brazilian representative at the Peace Conference in Paris, and had known President Wilson there.

We then returned to the Ambassador's home, spent a half hour in the beautiful grounds, taking some snap-shots as souvenirs, and making our adieus after a very happy and delightful day.

April 3. Dr. Alvaro Ramos called and invited us to a clinic for Monday. He informed me that the tentative committee on the affairs of the American College of Surgeons had met, added two to its number, and as a full-fledged Committee on Credentials, had elected Dr. José de Mendonça as Chairman, and Dr. Olympio da Fonseca as Secretary. As Dr. da Fonseca has been



FRESH WATER CANAL, PETROPOLIS



TENNIS CLUB, PETROPOLIS

for many years the Secretary of the Society of Medicine of Rio de Janeiro, we felt that an experienced man had been chosen. The day was warm and we kept well within doors and enjoyed a Sunday rest.

In the evening we were the guests of Dr. Bowman C. Crowell at the Hotel Central. The Norwegian Minister, Mr. Herman Gade, and his charming wife, a Chicago woman, were also guests. It was a delightful treat to limber up our Yankee tongues and be sure that we were being understood. We adjourned to the roof garden for coffee, and had another view of the electric-lighted bay and city. But a short distance away was Sugar Loaf, with its stations illuminated and its little basket of human cargo swinging to and fro.

A Surgical Clinic

APRIL 4. Visited the Misericordia Hospital, the large municipal institution with several hundred beds, and witnessed an operation by Dr. Alvaro Ramos.* The case had been well worked up and the records were read and translated to us. The diagnosis was a "retroperitoneal cyst of the middle abdomen." The written records shown to us in this hospital would have

*Dr. Alvaro Ramos died in August, 1921.

warmed the heart of the Committee on Hospital Standardization of the American College of Surgeons. Ether anæsthetic was administered. The cyst was exposed and rolled out, and proved to be a tumor of the mesentery. It was skillfully handled and we could not but be pleased with the correctness of the diagnosis. Dr. Ramos was a skillful surgeon. His technique was that of the French, and of the character that one would approve for an operation upon himself. These are capable, daring operators. Dr. Ramos showed us his wards, large airy rooms, the laboratories, and the large out-door dispensary containing hundreds of waiting patients.

Strangers Hospital

WE then drove with Dr. Ramos and Dr. Franklin P. Pyles (an American surgeon) to the Strangers Hospital, the English hospital, built in an attractive location on a hill overlooking Botafogo Bay. With Dr. Ramos we also inspected a large insane hospital in which he had a surgical service. We then visited his home, a commodious residence on a fashion-



FISH VENDOR, PETROPOLIS

able street, where we viewed his extensive library. Three large rooms, filled to the ceilings, were required to accommodate the books and pamphlets. Dr. Ramos is proud of this library, and he may well be. He had English, German, French, Spanish, Italian, and Portuguese journals and text books, all of which he reads. I was gratified to see that *Surgery, Gynecology and Obstetrics*, in files from the beginning, occupied several shelves, and that he had taken the *International Abstract* from the journal proper and made separate volumes of it. He took pains to show us a number of copies of the *Journal of the American Medical Association* which contained the articles on South America written by Dr. Nicholas Senn fifteen years ago.

Luncheon with Dr. Chagas

AT twelve o'clock Dr. Watkins and I with our wives were guests at luncheon at the home of Dr. Chagas. This gave us another opportunity of visiting a Brazilian home. Dr. Chagas, who speaks some English, and his charming wife, who speaks more English, and an attractive son of seventeen who outstripped them all, were our hosts. Dr. and Mrs. Crowell and one other couple were also guests. We had a delightful hour, and we are looking forward to the visit that Dr. Chagas and his family are about to make to the United States. This scientist has a charm of manner that is irresistible, and an expression of adequacy and extreme modesty.

An Emergency Operation

ON one of the early days of our visit to Rio de Janeiro Dr. Clark called for us in the edge of the evening to see an emergency appendectomy which Dr. de Mendonça was to perform on one of his students. He was to operate in a strange hospital. Everything was new to him, and besides Dr. Clark, who was acting as first assistant and who was giving the ether anæsthetic, he had but one assistant in the operating room.

The case was a difficult one, with a retrocæcal gangrenous appendix. The operation was carefully and skillfully performed. We were grateful to this great surgeon for calling us to see an emergency operation that was to be performed in a strange environment—which always takes courage and shows that the operator has the courage of his convictions.

April 5. Visited a well equipped hospital which had been the residence of a wealthy citizen, and which was located in an

extensive private garden. It is exclusively for maternity cases and attendant ills. We were met by Dr. de Castro, the Director of the Faculty. We saw an abdominal section for a retroversion, and a Gilliam operation, skillfully performed. The operating technique was conventional and good.

We then drove to another Maternity Hospital, where we saw Dr. Magalhaes, a handsome man with the face and appearance of our own Marion Sims in his younger days. He showed us his hospital and we saw him do an interesting operation on an ovarian cyst. There has been an attempt to screen this hospital under the inspiration of a South American who recently visited North America, but it has been a failure because instead of placing a large screen on the outside of the large window casing in a position not to interfere with the opening inward of the French windows, the screens had been placed in one or two of the window lights of the French windows, leaving the glass panes in the balance. To make the screens effective, the windows must remain closed and the air is excluded. If the windows are opened, as they should be most of the time, the screens are of no use. It was evident, of course, that the screens were not a success and had failed in practice to popularize themselves.

The American Chamber of Commerce

AT noon we were guests at the Restaurant Assyrio of the American Chamber of Commerce of Rio de Janeiro. This luncheon was given in honor of the members of the American Express Company's party. About two hundred men were in attendance and it was an attractive function. Dr. Watkins was one of the speakers.

In the evening Dr. Watkins and I were guests at a banquet given at the Hotel Central by a group of the medical men of Rio de Janeiro. Among the Rio de Janeiro medical men present were Drs. de Castro, Chagas, de Mendonça, Ramos, Couto, Vaz, Clark, Fonseca, Leas, Marinho and others. Dr. de Mendonça presided at the social function which followed the banquet and read an address to the guests. The banquet was given as a courtesy to the representatives of the American College of Surgeons. I responded in behalf of the College and thanked the profession of Rio de Janeiro for the cordial reception they had given us. I explained the reason of the visit of Dr. Mayo and myself in 1920, and of my return visit with Dr. Watkins, and in behalf of the College, invited the surgeons of Brazil to visit the Clinical Congress of the College in Phila-



OX-DRAWN HAY-RACK

delphia. I spoke particularly of the broad culture of the South American surgeons and our realization that the medical men of South America were not satisfied with their own immediate environment alone and were not content to remain provincial, but that they insist upon taking supplementary courses of graduate instruction in England, France, or Germany; that this presupposes the knowledge on the part of the South American doctor of at least one language besides his own, and frequently of two or three foreign languages; that the South American surgeon is, therefore, a world's man, a cultured man, and not of the too commercial type; that we found the members of his family to be linguists; that they have travelled, and that they are highly cultured; that the average South American surgeon—in his knowledge of the world, and in his professional information—is probably far in advance of the average of his professional brethren in the United States and Canada; that Dr. Mayo and I had found in South America some of the best hospitals in the world; that we had observed some of their surgeons at their work, and had admired it, and that we hoped all of this would cement a closer relationship between the surgeons of the two Americas; that our problems are different, and only by a friendly interchange of opinion can we view things from the same standpoint; that many of our surgeons of North America are desirous of visiting South America and of



WATER ISLAND, HARBOR OF RIO DE JANEIRO

learning from the surgeons of the southern continent; and, in turn, that we wish to have the surgeons of South America visit the United States and Canada.

I closed my remarks by congratulating the surgeons of Rio de Janeiro, the metropolis and capital city of Brazil, in establishing but one medical school. I urged them as men in authority to combine in their Faculty of Medicine all of the strong men in order to prevent the development of factional groups, which would scatter the efforts of the profession by fruitless competition.

April 6. Witnessed an operation by Dr. Pyles, a capable American surgeon, at the Strangers Hospital.

A Nose and Throat Specialist—Dr. João Marinho

APRIL 7. Inspected an office building, built and equipped by Dr. Marinho, a nose, throat and ear specialist, as his exclusive office work-shop. The building is four stories in height, and about twenty by thirty feet in area. An elevator connects all floors. The building is utilized as follows: First floor—reception room with office attendant, and recording room;



DR. JOÃO MARINHO

Professor of Rhinology and Oto-Laryngology
Faculty of Medicine, Rio de Janeiro

second floor—clinic for people who can pay nothing or very little, fully equipped with several stalls where he and his assistants work several hours in the morning of each day; third and fourth floors—offices for private patients and extensive laboratories; fifth floor—an assembly room, with projectoscopes, lanterns, and other equipment for teaching and demonstrating to groups. The building occupies a site in the center of the business section of the city. It is constructed of stone, steel, and glass, and contains the latest type of modern office equipment imported from Europe and America. The builder of this palace workshop is a charming man, and is one of the distinguished teachers in the Faculty of Medicine. He is about forty-five years of age, full of enthusiasm, and devoted to his work. He speaks some English, and has promised to visit the United States.

Interesting Days

AT eleven o'clock, Mrs. Martin and I decided to take another trip to Corcovado. We went by the São Silvestre tram and climbed from there to Paineiras by cog. On the terrace of the hotel, overlooking the sea in the direction of the Country Club, we had our luncheon and feasted our eyes. After walking a mile by the old aqueduct, we went to the top of Corcovado. In this instance it was cloudless.

At five o'clock of this same day we were the guests of the Mendonças and the Clarks at the Rio de Janeiro Athletic Club, the Fluminense. It is a club of great beauty at the mountain base in the fashionable residence portion of the city, adjoining the Emperor's old palace, the grounds of which portions of it overlook. It contains a foot-ball field, tennis courts, buildings with billiard and card rooms, dining rooms, ball rooms, libraries, and bowling alleys. There is also a large swimming pool, with a canopy top and balconies for spectators. Fresh salt-water from the sea is constantly pumped into the great tile-lined tank.

At eight-thirty in the evening our party of five dined with Ambassador Morgan at the Country Club. There were sixteen at dinner. Mr. Morgan is an ideal host and is to be envied in his position. He has gathered about himself a delightful court from the English speaking colony and is equally popular in native circles.

April 8. Dinner with Dr. and Mrs. Pyles at the Jockey Club. The Crowells, Mr. Gade, the Norwegian Ambassador,

and his wife and a number of others were present. Mrs. Pyles is an exceedingly attractive woman and a charming hostess. Dr. Pyles' father was a Virginian who migrated to Brazil with a number of southerners after our Civil War. Dr. Pyles was born in Brazil, but received his education in the United States. He is devoted to his profession of surgery and to the Brazilians.

Embarking on the SS. Vauban

APRIL 9. And now, with sadness and regret, we have come to the end of this holiday that has had so much of profit and pleasure in it. We were driven to the SS. *Vauban* at noon, preparatory to sailing at four o'clock; but previous to this, that our last day might be punctuated by the business in hand, we went with Dr. Clark to witness an operation for nephrectomy under local anæsthesia by Dr. de Mendonça. Everything passed off according to schedule, and we were more than ever filled with admiration for the graciousness and skill of this great Brazilian surgeon.

At two o'clock, as we looked out from the deck of the ship, the Mendonças and the Clarks appeared, and in the arms of the ladies and the chauffeur were great bouquets of flowers for Mrs. Watkins and Mrs. Martin which fairly filled our state-



EMPEROR'S PALACE, NOW A MUSEUM

rooms. Mr. Morgan brought us magazines, Dr. Ramos, Dr. de Castro and Dr. Marinho came to say adieu, and at the last hour came Dr. Olympio da Fonseca, the Secretary of our Committee on Credentials, with his greetings and a substantial package which contained the applications for Fellowship in the College of the seven members of the committee, duly signed and approved, each with a draft pinned to it covering the membership entrance fee. A list of a number of candidates, including a group from Bahia, will follow.

The bell tolled, final goodbyes were said, and the curtain slowly descended on a great scene of a great drama.

Committees on Credentials, Brazil

SINCE our visit to Brazil, the following Committees on Credentials have been selected to serve, in addition to committees in São Paulo and Rio de Janeiro:

Recife—Professors Arnolio Margues and Paulo de Aguiar.

Bahia—Professors José Adeodato, Antonio Borja, Caio Moura, and Fernando Luz.

Bello Horizonte—Professors Hugo Werneck and Borges da Costa.



JOCKEY CLUB



SUMMER HOME OF DR. OLYMPIO DA FONSECA

Estado do Rio Grande do Sul—Doctors Berchon des Essartz and Alphen de Medeiros, and Professors Sarmento Leite and Arthur Franco.

Brazilian Surgeons Recommended for Fellowship in the American College of Surgeons

The Committees on Credentials of the American College of Surgeons in Rio de Janeiro and São Paulo have recommended the following for Fellowship in the College:

Rio de Janeiro

Crissiume Filho
Raul Baptista
Fernando Magalhães
Octavio Pinto
Castilho Marcondes
Carlos Rohr
Benjamin Baptista
Nabrico de Gouvea
Oulives e Barros
Pedro Ernesto
Jayme Poggi

São Paulo

Sylvio Maia
Antonio Vieira Marcondes
João Britto
L. F. Baetas Neves
José Barboza de Barros
Francisco Ponipeo de Camargo

RETROSPECT

THIS was my second visit to the South American countries. Some one in Argentina asked me why I came back. Some one in Brazil has asked me if I shall return to this country. One visits these countries for the first time in a spirit of adventure, because one has in one's vision great countries in our own southern continent where new things will be found, where new beauties will be appreciated, and where a people of a new world will be building a new empire upon a prehistoric empire; where the Southern Cross will give a new standpoint from that of the Polestar, and where one can spend a profitable holiday away from the snow and frost of home, in a land of warmth and sunshine.

One visits these countries a second time not in a spirit of adventure and exploration but in a spirit of friendship—friendship for its civilization; friendship for a people of old Portugal and Spain, recreated by decades of transition on the lands of a southern America to a strong race of loving, competent people; friendship for a people who take time to be polite, to gain culture, to cultivate the arts, and to learn the languages of the world. One comes to get relief from the sordid hustle and bustle of a too practical country, and to drink in some of the wine of repose and vision that is possessed by these Americans of the South.



RUA PAYSSANDU, FROM EMPEROR'S PALACE

And so, life being spared, we will come again and again. When we are away in our own great land and at our work, we shall profit by our memories of the artistic people of the land of sunshine, and shall know that we have friends with warm hearts and glad eyes waiting to give us the hearty handclasp of welcome another year. We will come because we admire their great countries and because we have learned to love their people.

CHAPTER X

GENERAL

DR. WATKINS' OBSERVATIONS



RACES. The Indian race is much in evidence in Peru and Brazil, and only to a very limited extent in Chile, Argentina and Uruguay. There are numerous native uncivilized Indian tribes in northern Brazil. The negroes of South America, of whom there are many, were very interesting to us, as there is no color line, although slavery was abolished later than with us, as late as 1889 in Brazil. Negroes are numerous in Peru and Brazil, much less so in the other countries we visited. South America should be an everlasting joy to the race as there is no evidence of color prejudice. Some of the negroes are very well educated, industrious and prosperous. For example, the superintendent of the insane asylum in Rio de Janeiro with 1,400 patients is a negro of high intelligence, culture and ability. He is generally considered one of the representative men of Brazil. He has a very keen and intelligent knowledge and interest in the individual inmates of his institution. He has been the state representative to many countries, and to congresses on psychiatry. He has a very large library and reads and speaks fluently in five languages, *viz.*, French, Spanish, Portuguese, German and English. He speaks English so fluently he would easily be taken for a native of England or the States. He is an exceptional man, but well illustrates the possibilities of the negro in South America. We were informed in São Paulo that tuberculosis and interrelation with the whites solves the negro problem. A São Paulon said that the white men were very partial to the negro women, and a Rio de Janeiro doctor volunteered the information that the negro was much desired by the German peasant woman.

"DOCTORS. There are some features about the doctors of South America that are very interesting. Sons of rich families often study medicine and become leaders in their pro-

fession. The doctors we met are voluminous readers. They read more French, German, and Portuguese than they do English, and yet they are very conversant with our literature. Dr. Montenegro of São Paulo modestly said: 'We have to read much as we produce nothing.' The *Journal of the American Medical Association, Surgery, Gynecology and Obstetrics*, and some of the English medical journals are commonly read in South America. Many of the doctors work hard and sustain a keen scientific interest under what would be to us very trying climatic conditions—excessive heat and moisture. This keen scientific interest was more noticeable to me in Montevideo, São Paulo and Rio de Janeiro than in the other cities we visited."

DR. MAYO—SUMMARY OF HIS VIEWS

"I HAVE been asked a number of times, 'Do you mean to say that all the surgeons of South America are of this high grade you speak of?' I can only answer that all the work I saw was high-grade, but I saw only the best men, and not by any means all the best men. Relatively the comparison with other countries is a fair one. As I have traveled at home and abroad year after year to see surgical work and to learn surgery by direct observation of the surgeons and their clinics, I have seen only the best. And why should I do otherwise? If I wanted merely to see bloodshed, that could be seen at the stockyards; if I were looking for poor work, that could be seen at home as well as abroad. Since the object of travel is primarily self-improvement, time should not be wasted looking for things done badly and for things to criticize.

"I learned much in the short time I was in South America, not only of surgical conditions as they are seen in the United States, but of the surgical complications of so-called tropical diseases. Many of the diseases are tropical in the sense that they exist as yet only in the tropics, probably because easy means of communication to other countries have heretofore been lacking. In the future we can expect them to spread from one country to another. Such diseases are to be found in the northern islands of Japan under climatic conditions similar to those in the northern part of the United States and in Canada. There is a rare opportunity for our medical men to study these diseases in South America and to learn from the experience of the medical profession there how best to care for them. In like manner the physicians of South America may learn from us with regard to the forms or phases of diseases in

North America. Exchange of professors and exchange of students will mean much to the health conditions of both countries. The medical profession of South America will be glad to undertake such co-operation. The Spanish edition of *The Journal of the American Medical Association* is having a great deal of influence in establishing closer relations between the medical profession throughout Central and South America.

"In trying to account for the underlying causes of the present undercurrent of unfriendliness in South America to the United States, it should be remembered that American business interests have sent emissaries to South America for the purpose of establishing trade relations that would be profitable to the United States without much regard for the manner in which the South Americans would be affected, and we certainly have been very patronizing when we have talked about the Monroe Doctrine. Fortunately, our government has men of the highest diplomatic standing representing us in South America. I had great pleasure in meeting the Chargé d'Affaires, Mr. William Walker Smith, in Lima, Peru; the American Consul, Dr. Cameron, in Tacna, Chile; the American Ambassador, Mr. Frederick J. Stimson, in Buenos Aires, and Mr. Robert Jeffery, American Minister to Uruguay, in Montevideo. These gentlemen are highly respected and are doing everything possible to promote a better understanding.

"Many evidences are now apparent of a new spirit in our business relations with South America. Today the great American business firms are establishing South American branches and view the trade question not only from the standpoint of the United States, but also from the standpoint of fairness to South America, with the idea of developing her resources. American methods and American labor-saving machinery are rapidly being introduced in the building of docks, railroads, and industries. An example of this was shown in building the railroads in Chile. Mr. Wenceslao Sierra, one of the great railroad builders of Chile, was anxious to introduce American methods, but his people said: 'We have thousands of laborers who work cheap. We do not need to consider labor.' They did not see that the price for a ton of food would be much greater than that for coal to produce the same amount of energy, and that even if people worked for nothing, much of the work could be done cheaper by machinery. Mr. Sierra came to the United States and bought steam shovels and dump cars; he secured a sufficient number of skilled technicians to operate them and returned to Chile. He completed his work in advance of the specified

date, and the profits on time contracts alone ran into millions of dollars.

"The American motor car is seen everywhere in South America. Henry Ford may not be a great historian, but he certainly has done more than any other man for the effective transportation of the individual, for the building of good roads, for the contentment and prosperity in the rural districts, and in South America, for the improvement of the somewhat dubious reputation of the American square deal, as related to one hundred cents of worth for the dollar invested. Reliable American concerns, such as the General Electric, United States Steel, American Express, Baldwin and American Locomotive, Pullman, Swift, Wilson and Armour, are gradually building up the confidence of the South American public. Large American banks, for example, the National City Bank of New York and the Boston National Bank, are establishing South American branches and a system of credit satisfactory to the merchants of South America. The genius of the American people lies in their ability to develop the natural resources of a country, and South America is the land of opportunity.

"It is to be feared that the average young American, as an individual, will not have a great opportunity in South America. The exceptional man will have opportunities; but the projects to be undertaken are so vast and require such enormous capital that they can be handled only by large moneyed interests, and these must be managed by empire building men of the type of the late James J. Hill. Times in South America will be troublous for years to come; for that matter, they will be troublous in North America; but we have a great middle class which holds the balance of power and renders our institutions safe. When South America introduced compulsory education, aristocracy was doomed. People cannot become educated and remain contentedly in poverty and squalor. The safety of any country lies in the development of a contented middle class. The so-called radical party, through politics, has gained many much talked of rights, but as yet acknowledges few if any duties. Labor in South America is rapidly becoming as laborless as in other countries.

"Our reception in South America by the medical profession, the people and the government officials was everywhere most cordial. The organization we represented, the American College of Surgeons, is based on principles that appeal to the Latin Americans, as they do to all right-thinking, unprejudiced men. Preliminary steps were taken to render this

organization Pan-American, and the success of our mission was most inspiring.

"The Latin races have high ideals and are inspired by that which appeals to their imagination. When approached on this ground they are most cordial and ready to reciprocate freely, but the United States has not heretofore approached the people of South America in this spirit. North America can appeal to South America if the appeal is based on altruism, but the present supercilious attitude must be discarded and an honest perspective of the South American people and their ideals obtained.

"PEOPLE. In a study of the characteristics of the people of North America and South America great differences will be found, since the cultured, intelligent class, white or largely white, in South America is small, while the ignorant Indian class is extremely large. Unfortunately, up to the present time there has been almost no middle class in South America, although such a class is in the process of development. In the large cities primary education, while not compulsory, is extensive. In Brazil the primary schooling is three years; in Peru, Chile, Argentina and Uruguay it is from five to six years. The difficulties of general education outside the cities, where the estates are very large and the population scanty, are not easily overcome.

"The course of education in the secondary schools is six years, but these secondary schools are limited in number. In the various countries in South America Spanish is generally spoken by the cultured class. French and English are the next most extensively spoken. In most of the secondary schools English is taught, at least as an elective study.

"Persons intending to go south would do well to learn Spanish; a knowledge of this language will also enable them to communicate with people who speak Portuguese. Spanish is easily learned and the vocabulary is relatively small. When the vast possibilities of South America, which are equal to those of North America fifty years ago, are considered, and it is realized that South America at the present time is as yet underdeveloped and underpopulated, no prophet is needed to foretell that Spanish will be a very useful language to the North American; it should be taught generally in our public schools.

"Whatever may be our after-war duty in Europe, about which there is so much difference of opinion, there can be no difference of opinion with regard to the necessity of the establishment of friendly relations with the great and growing republics

of South America. In some parts of South America the spirit of friendliness toward North America does not exist. There has been a tendency for North Americans to go to South America for the purpose of exploiting the country, and without extending to the inhabitants even common politeness. Germany, England and France have vouched for the goods their merchants sent to South America, and the South Americans have not been prepared to combat the principle of 'buyer beware' which appears to have been the motto of at least some North American business firms who have been developing South America into a dumping ground for inferior goods."

DR. MARTIN'S GENERAL OBSERVATIONS

Medical Schools

WE visited medical schools connected with the national universities at Lima, Santiago, Buenos Aires, Montevideo, São Paulo, and Rio de Janeiro. A primary, high-school, and university education is required by the medical schools for the admission of students. Peru, Chile, Brazil, and Argentina require a seven-year course of medicine, while Uruguay requires but six. So far as we could judge them in our cursory visit, the physical properties of each of these schools were adequate and modern in every detail. Judging from the provision for free hospital beds in so many of the hospitals of the cities in which the schools are situated, which are under the control of the faculties, the clinical material should be abundant. The laws of each of the governments provide for a reasonable distribution of dissecting material, and postmortems are an accepted requirement. Our opportunity for meeting a strong group of each faculty was most favorable, and if the faculty as a whole approaches in point of ability the members with whom we became acquainted, the faculties are exceptionally strong. While it was vacation time and the medical schools were not operating at full capacity, we had an opportunity of observing and meeting a large number of students and a larger number of recent graduates who were serving as internes in the hospitals, and I am sure we were agreed that in appearance they compared favorably with those of the United States, Canada, and England.

The leaders of the faculties are men who have supplemented their home training by study in France, Germany, or other

foreign countries, while a few have been in the United States. One cannot but realize that these medical schools are built on sound, fundamental bases. However, it was not possible for us in a short visit during the summer vacation season to judge of their present teaching value.

And this is what we found in the South American republics which we visited. A premium is placed upon education, a knowledge of the languages, and experience gained in foreign travel. The cultivation of the finer graces is encouraged. The study of art, literature, and music of the highest quality is pursued, and a knowledge of the finer arts is considered essential to good breeding. I wish that all of our friends could know as we do these outstanding characteristics among their maturer men, who are so honored and looked up to by their younger followers and admirers—Gregorio Amunátegui, Alberto Adriasola, and Lucas Sierra, of Chile; Marcelino Herrera Vegas, Daniel J. Cranwell, and Pedro Chutro, of Argentina; A. Ricaldoni, Enrique Pouey, and Gerardo Arrizabalaga, of Uruguay; Juvenal Denegri, Miguel C. Aljovin, and Guillermo Gastañeta, of Peru; José de Mendonça, and J. Alves de Lima, of Brazil.

Our Hosts of South America

THE Panama Canal has brought the western coast of South America—Lima, Valparaiso, etc.—within fourteen days of New York City, Chicago, or New Orleans. With a return to normal shipping conditions and a growing acquaintance with our South American people, a merchant marine, by mutual agreement, will soon develop that will make us the closest neighbors. And one needs to visit these countries but once to appreciate the great worth and charm of these neighbors.

We were privileged to make our visit under exceptional circumstances. We were practically official guests; but in the busy times we had an opportunity of sitting at the home tables and getting an insight into South American family life. Everywhere we were charmed. The young men and women, the sons and daughters of our hosts, were interesting to study. In their education they are early trained in the arts, in the classics, and in the languages. The young women cultivate their music, and on a number of occasions we were thoroughly entertained by the daughters of the families playing with unusual skill the classics of Chopin, Liszt, and other composers with thorough ease and enjoyment. The young men are ambitious, and all of the young men and women have either spent a year or two in European travel, or are planning to do

so. In their preparation for such travel, they have almost invariably learned English and French. And while in the past they have looked almost exclusively to Europe as their travel ground, they are now talking of America, and this spirit of friendliness and appreciation for the United States is materializing rapidly and nothing will develop their attitude more than visits by us to their countries. We must lay aside our provincial airs and cocksureness, and be willing to broaden out as they have done, learn their language as they have learned ours, and make ourselves worthy of a cosmopolitan friendship.

Survival of the Fittest

HOW little do we know of the people of the southern continent! We were accustomed to thinking of them as the inhabitants of a number of small republics which would compare in area to so many of the states of our own country. In our ignorance we considered them, of necessity, more or less provincial. Our idea is now changed. Instead of being provincial in their attitude toward life, we found the peoples of South America to be the broadest and most cosmopolitan in the world. And why shouldn't they be? The continent of South America, including the Central American states, was the first to be explored by European countries. Taking Peru as an example, review for a moment its history. It had an ancient civilization that antedated by several centuries the discovery of America. This race was overrun, and after a prolonged struggle it was conquered by armies of Spain, led by the most competent adventurers. With the subjugation of the Incas, the Europeans intermarried with this strong race of natives, and for four hundred years this melting-pot has been fed by the men and women of vision and adventure of Europe —England, France, Italy, Germany, and Holland—and from it has emerged a strong nation of self-reliant Peruvians, which represents the survival of the fittest of centuries of evolution.

And that is how they appear! They are of strong physique, self-reliant in attitude, their strength of character predominates, and they are ambitious for self-education; they are not satisfied to retain a local outlook; they are not as we are prone to be —selfish in our preparation for intercourse with the world; they, most of them, know and cultivate at least two continental languages besides their own; they seek a classical education at home and supplement this with world travel and study abroad; they are people of strong temperament and broad vision, and they are interesting in their social intercourse with each other

and with the strangers within their midst who are properly vouched for. And here, in a country that is a paradise of beauty, a wonderful people is pursuing its life, conscious of its worth, and with a world experience that compares favorably with the best of its continental confréres.

And what applies to Peru is equally true of Chile, Argentina, Uruguay, and Brazil—similar experiences, similar conquests, similar European emigration, similar yearning for independence; fertile land, mountains that are filled with minerals, and climates that attract the lovers of life; these are the ingredients of a melting-pot that has evolved a new people in a new civilization that cannot longer remain unrevealed.

No one can visit our southern continent, if he travels in comfort, and view the mountains, the valleys, the rivers, and the plains of its vast area, know and converse and live with its fascinating people, and experience the thrill of its stimulating and agreeable climate, and not say to himself: "I shall go again."

Importance of Standpoint

DR. MAYO, as we all know, is the philosopher of practical surgery. We may not have thought of him as a philosopher-poet, but on a number of occasions on this remarkable trip of ours the claws of practicality were padded, and in the purple atmosphere of the southern continent the poet emerged. "In coming to South America," he said to the Secretary of State of Uruguay, "we have succeeded in changing our standpoint. In our northern continent we live under the Polestar, and our whole view is from the standpoint of the northern heavens. Now we have visited and viewed for the first time the heavens of the Southern Cross, and with this experience our range of vision has been broadened and the expanse of our standpoint has been doubled. In the future, America will mean to us all-America, including that under the Polestar, and no less that under the Southern Cross."

After visiting a few of these wonderful countries, the United States grows smaller in one's estimation, and the only way we can keep it big is to be willing to broaden out as citizens. Many representatives of the medical profession of South America will visit the United States in the next few months and years. Let us look to our laurels! Remember that they have hospitals which are equal to our best, and most of them are much more attractive. Remember that each of their principal countries has a national medical university as thoroughly equipped as are our own, with world-trained faculties,

and a seven-year curriculum as compared with our four- and five-year courses. Remember that the man you are entertaining has not been satisfied with the advantages afforded by his own country, but that he has also observed the best in France and in Germany. Remember that you are associating with a man from a country where a classical education is the prerequisite of a gentleman. The United States now has the opportunity to enter into competition with the countries of the world as a medical-educational center. There is but one way to make good, and that is to utilize our great resources to the fullest extent and to do it with the realization that we are only one of the many nations which possess unusual resources. If it is possible, let us cultivate modesty, and the best way to do that, and certainly a pleasant way, is to visit the medical profession of South America.



BIRD'S-EYE VIEW OF LA PAZ, BOLIVIA
Snow-capped Illimani in Distance

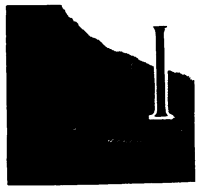


DR. MIGUEL H. ALCÍVAR

Professor of Operative Medicine
Faculty of Medicine, Guayaquil

CHAPTER XI
ECUADOR AND BOLIVIA

By Francis P. Corrigan, M.D., F.A.C.S., Cleveland



T is a great pleasure to be able to report to the Fellows of the American College of Surgeons the completion of the mission on which I was sent to Ecuador and Bolivia, as the result of which the most prominent surgeons of these two countries have accepted with enthusiasm the invitation of our organization to affiliate themselves with it. A number of the leaders of the profession in the more important cities are now engaged in expanding the movement and are acting as Committees on Credentials in the work of adding to our membership the men of the character whom the American College of Surgeons wishes to include. It does not bespeak overconfidence to express the belief that within a short time we will have in our ranks practically all of the leading surgeons of both republics, and while they will be numerically small they will represent the highest type of citizen. As they are men of wide influence, their action in affiliating with the College will be of great assistance in the development of good will, not only among the members of the medical profession but in far wider circles.

SURGEONS OF ECUADOR AND BOLIVIA

THE surgeons of Ecuador and Bolivia are a splendid body of men. In their profession they represent as fine a type as could be the boast of any country; they are advanced in training and methods; men of broad culture and of the gracious and hospitable manners for which cultivated gentlemen of Hispanic-American blood are noted. My experience while in charge of the Chile Exploration Company Hospital at Chuquicamata, Chile, in 1918-19, had led me to expect as much. This hospital is located in a large copper mining camp 10,000 feet

up in the Andes, a day's journey from the coast. It was established by the Exploration Company, a Guggenheim corporation, to care for its people in that section. When I accepted the post I discounted somewhat the description of the hospital that was given to me and expected something rather crude; but on my arrival at the mines I found that the Guggenheims had erected a fine modern hospital which had an equipment as complete as that of any hospital to be found in the United States, this equipment involving the usual large annual deficit which seems to be essential to the success of every hospital.

The fact that this hospital was North American and new, made it an object of interest to many physicians and surgeons of Chile and neighboring countries, also to many educated laymen. They came to visit us and I began to meet and know my South American colleagues. I encountered many able men of charm and interest and was increasingly glad of every opportunity to amplify my knowledge of them. I look back with pleasure on my many pleasant social experiences with these courtly people. My contact with these visitors and our own splendid neighbors gave me a foreknowledge of the kind of men I would meet among the surgeons of Ecuador and Bolivia.

Reception as a Representative of the American College of Surgeons

THE movement to bring the South American surgeons into the American College of Surgeons was started in 1920, when Dr. William J. Mayo and Dr. Franklin H. Martin went to Peru, Chile, Argentina, and Uruguay. They wished also to visit Ecuador and Bolivia, but the capital of each of these countries is in the interior, not easy of access, and the journey would have taken more time than they had at their disposal. No doubt my South American expedition in behalf of the College brought me the honor of extending to the surgeons of these republics an invitation to become affiliated with the American College of Surgeons, but the mission of Dr. Mayo and Dr. Martin was not news to the men whom I met, and in a great measure I am indebted to the pioneer work of those incomparably splendid representatives for the success with which I met. They had paved the way, and the countries which they did not visit on this initial trip were merely awaiting a formal invitation to join in the movement.

QUITO, ECUADOR

Señor José Gabriel Navarro

THE first city I visited was Guayaquil, the principal port of Ecuador, and from there I went to Quito, the capital. In my brief stop at Guayaquil I arranged for a meeting of the surgeons to be held on my return from Quito.

The journey to Quito by a zig-zag railway which climbs out of the tropical jungle up into the mountains is one to make an enthusiast of even the most blasé traveler. On the second day of the journey, after leaving Riobamba and approaching Quito, the route brings into view some of the highest and most beautiful peaks of the whole Andean Cordillera.

I had a wonderful guide on this journey in the person of Señor José Gabriel Navarro, Director and Founder of the College of Los Belles Artes in Quito. I was intensely interested in the information he gave me about the old Inca kingdom which formerly occupied and still lends a wonderful color to this great, high plain between the two chains of the Andes. But more than this I was heartened by the significance which he attached to my visit as indicating the kind of a reception I might expect in Quito. I was a rare kind of a visitor because I was not a tourist, I was looking for no concession, and I had nothing to sell.

Mr. Charles Hartman — Señor Pablo A. Vascoñez — Señor Don Carlos Tobar y Borgoña

MR. Charles Hartman, the American Minister, is the Dean of the Diplomatic Corps of Quito and a representative of whom his country may well be proud. He treated me to some genuine American hospitality and took a real interest in my mission. Through his kindness I had the pleasure of meeting some of the charming and cultured people of the Ecuadorean capital, as fine and distinguished a group of men as it has been my good fortune to encounter anywhere.

Among the public men who interested themselves in the object of my mission were Señor Pablo A. Vascoñez, Minister of Public Instruction, and Señor Don Carlos Tobar y Borgoña, Rector of the National University. These two men are among the most distinguished educators and public men of Ecuador. The Ministry of Public Instruction is a cabinet office and I was privileged to visit with Señor Vascoñez in his department headquarters in the historic old National Palace built in Spanish colonial times.



DR. ISIDRO AYORA

Professor of Gynecology and Obstetrics
Central University of Ecuador, Quito

Señor Tobar, now Rector of the University, had but recently retired from the position of Minister of Foreign Affairs, which corresponds somewhat to the post of Secretary of State in our own cabinet. In this position he had been in almost daily contact with our Minister, Mr. Hartman, and they proved to be old friends. He was kind enough to invite me to his home and I thoroughly enjoyed an informal visit in his wonderful old-world mansion accompanied by my splendid sponsors, Señor Navarro and the American Minister. I wish that I could convey the charm I felt in the presence of Señor Tobar who is possessed of a most engaging personality. He is tall, slender, fine-looking, trained for a diplomatic career, and a man of the world in the very best sense of that description. I describe him because he epitomizes the attributes of his race. He is intensely interested in cultural and educational matters and visualized the importance of our movement from the general educational standpoint. In the course of our conversation he discussed the possibility of the government itself sending one of the Professors of the Medical Faculty as an official representative to the next Convocation of the College.

Preliminary Conference—Official Committee

ALTHOUGH it happened to be holiday time when I arrived in Quito, Señor Tobar, in his capacity of Rector of the University, arranged to have a representative group of the Medical Faculty hold a conference with me so that I might have the privilege of explaining to them the aims and ideals of the American College of Surgeons.

This official committee was headed by Dr. Angel Saenz, Dean of the Medical Corps, a distinguished ophthalmologist and chief of the eye department, a man who has won an enviable name for himself in this part of the world. Dr. Carlos A. Serrano, Surgeon Major of the army, Dr. Eustorgio Salgado, distinguished specialist in genito-urinary surgery, and Dr. Pablo Arturo Suarez, in charge of the department of X-ray, were also members of this committee.

They did me the honor of waiting upon me in my hotel in the beautifully formal manner which is one of the charms of Hispanic-American life. They took a very serious interest in the methods of organization, the plans, and the ideals of the College. They had known of the organization only in a very general way and asked me many questions bearing upon detail. The interest evinced even by those who were not engaged in surgery aroused in me a feeling of regret when I



DR. RICARDO VILLAVICENCIO PONCE
Professor of Surgery, University of Quito

explained to them that membership in our ranks was open only to men of the right caliber who were engaged in surgery or one of the surgical specialties. They were keenly interested in the proposed plan of co-operation and impressed me as men of culture and discernment. The practical post-graduate results achieved by the clinics and demonstrations at the Clinical Congresses were clearly appreciated and I have no doubt that the future Convocations will be increasingly Pan-American in a more complete sense than in the past.

Nuevo Hospital Civil — Dr. Ricardo Villavicencio Ponce

BEFORE leaving Quito I had the pleasure of visiting the Nuevo Hospital Civil now in course of construction. Dr. Ricardo Villavicencio Ponce acted as my guide and showed me the plans for the finished structure. It is a magnificent plan which calls for the expenditure by the government of about seven millions of dollars, and contemplates a complete hospital with all departments affiliated with the medical department of the University. Dr. Villavicencio, a graduate of the University of Brussels, is Professor of Surgery in the University. The construction is far enough advanced so that with his aid I was able to get a good idea of the contemplated structure. One of the striking features is a graceful pergola with a slightly curving double row of solid columns supporting a solarium at least a thousand feet in length. The buildings are located on an elevated site so that they overlook the city and face the beautiful Mount Pichincha across the valley. A tunnel is being constructed which will penetrate the knoll on which the hospital stands. This tunnel will pass under all of the buildings and will carry the drainage from the hospital beyond the valley in which the city lies. Witli its beautiful location and in this wonderful climate it should be a notable institution when it is completed.

The Maternidad — Dr. Isidro Ayora

ANOTHER fine institution in Quito is the new Maternidad, a hospital devoted to gynecology and obstetrics. It was organized by its able Director, Dr. Isidro Ayora, who is also Professor of Gynecology and Obstetrics in the University. Dr. Villavicencio and Dr. Ayora are now associated in the expansion of the work of the College in Ecuador and are worthy representatives of their country.



DR. JUAN B. ARZUBE CORDERO

President and Professor of Gynecology
Faculty of Medicine, University of Guayaquil

GUAYAQUIL

Dr. Frederick W. Goding

BEFORE leaving Guayaquil for the interior, having arrived between trains, which leave several times a week, I had an opportunity to look around for a few days before starting for the capital. The pleasure of my visit to Ecuador was greatly enhanced by meeting with Dr. Frederick W. Goding, Consul-General of the United States, who has his headquarters in Guayaquil. Dr. Goding is an American physician who was peacefully practicing his profession in Illinois at the time of the Spanish-American war, when the martyred President McKinley's knowledge of his special ability along certain lines precipitated him into government service, first in the Philippines and later in other Spanish-speaking countries. It was undoubtedly a loss to the good people of Illinois, but a gain to the consular service which needs more of the fine type of men represented by Dr. Goding. Along with his official duties he has found time to keep in touch with the world of science, and during the seven years of his stay in Ecuador he has written several monographs covering original researches made by him on the very interesting insect life of that country.

Dr. Juan B. Arzube Cordero—Dr. Miguel H. Alcívar

THROUGH Dr. Goding I had an opportunity to become acquainted with Dr. Juan B. Arzube Cordero, President of the Medical Faculty and Professor of Gynecology in the local University. My meeting with Dr. Arzube was epochal as he was the first prominent member of the profession of Ecuador with whom I came in contact and his reception of me and my mission would go a long way toward demonstrating what reaction I might expect from the other members of the profession in his country. I need have had no trepidation on this score. Dr. Arzube, a splendid gentleman, would have received me courteously whatever my mission, and as it was he received me with enthusiasm. He repeated in almost as many words what the Prefect of Police had said to me when I went to his office for the formality of recovering my passport: "Your visit, Señor, is one of great significance to the medical profession of our country. It is indeed a grand idea to attempt to unite the surgeons of the two continents into one great organization so that we may profit by interchange of ideas."

Guayaquil is the seat of a university which has a complete medical department with approximately the same number of

students as the Central University at Quito, that is to say between eighty and ninety. Dr. Arzube is Dean of the Faculty and Professor of Gynecology. He is of the most progressive type, and when he was apprised of the plans and hopes of the officials of the College he became deeply interested and entered into co-operation in the heartiest manner.

The first man to whom he introduced me after my return was Dr. Miguel H. Alcívar, the Professor of Surgery and perhaps the most widely known of the Ecuadorean surgeons both inside and outside of the limits of his own country. His exceptional skill and ability have brought him deserved renown. Dr. Alcívar's visits to the various clinical centers of this country and his friendship and admiration for Dr. William J. Mayo and other prominent North American surgeons whose names had been identified with the organization of the American College of Surgeons made anything that I might say quite unnecessary; he was already a strong advocate of the idea of affiliation.

I am deeply indebted to these courteous gentlemen for their aid in the accomplishment of my mission. They invited me to attend what in their country is called a "breakfast" to be given in my honor at the leading club where I might meet some of the members of the medical profession. The *almuerzo* (or "breakfast" as it is translated) is really a very elaborate course luncheon which lasts for several hours and is one of the popular methods of entertaining guests in all of the Latin-American countries. This one was served in a beautiful dining-room overlooking the water, the club being located on the Malecón, a street which runs parallel to the water-front.

The men at the luncheon were not all surgeons but they were all interested in the movement of *rapprochement* inaugurated by one of the important North American scientific bodies. I was struck by the cordiality shown to me on all sides as an American medical man. I was struck also by their familiarity with the names of leaders of the profession in the United States. They made inquiries about the work and personalities of such men as Murphy, the Mayos, Crile, Ochsner, Cushing, and many others. The name of Gorgas is, or course, a household word in Ecuador and the feeling of gratitude engendered in the hearts of these people by the fine work of the sanitarians of the Rockefeller Institute is certainly something of which every American may well feel proud.

I felt a patriotic glow as I talked with these men, some of whom were engaged in carrying on the work that had been started by my countrymen. I realized how much the elim-

ination of yellow fever, for instance, had benefited this city and how the appreciation of that work was now making easier the closer affiliation of our professional life. This conception of mine was strengthened when later I made a tour of the hospitals of Guayaquil. The hospitals of Guayaquil are of the tropical type of construction. They comprise all departments and are in charge of well-trained, competent men. I might say in passing that the development of nurses' training schools is one of the notable things that requires attention. However, the need of a competent nursing body is recognized and steps are being taken to remedy this defect.

General Hospital—Dr. Juan Rubio

IN the General Hospital of Guayaquil the ability and reputation of Dr. Juan Rubio have contributed to build up an ophthalmological department that is somewhat out of proportion to the size of the hospital, but which in its completeness and general arrangement gives evidence of the excellence of this talented man. Diseases of the eye seem to be very prevalent in this country, perhaps aggravated by the constant brilliant sunlight. For this reason, perhaps, I found that Dr. Rubio's service in Guayaquil, like that of Dr. Saenz in Quito, was of greater importance than would be the eye service in a university hospital of corresponding size at home.

Committee on Credentials

I LEFT Ecuador with regret but cheered by the reception accorded to me by the press and the public, as well as by the profession. Dr. Alcívar and Dr. Arzube of Guayaquil having agreed to co-operate with Dr. Villavicencio and Dr. Ayora of Quito in the formation of a nationally representative committee to promote the affiliation, I departed with the feeling that the future development of the College was in the hands of men who could well represent its ideals.

BOLIVIA

IT was with considerable more confidence that the approach was made to La Paz, the capital city of Bolivia, and incidentally the highest capital in the world. Bolivia, the Mediterranean country and the fourth in area of South America, has no seaport. There are three routes of approach to the capital, the most interesting perhaps being by way of the famous Lake Titicaca, a lake which is twelve thousand feet above sea level and is navigable for large steamers.

Mr. Samuel Abbott Maginnis—Señor Celso Lugones—Dr. Manuel Mariaca

MR. Samuel Abbott Maginnis, the popular American Minister to Bolivia, was sponsor for our cause in La Paz. Through his courtesy introductions were secured to Señor Celso Lugones, Rector of the University, and Dr. Manuel Mariaca, Dean of the Medical Corps. A repetition of the same kind of interest that had been shown in the sister republic was here manifested. Señor Lugones, who was interested in the mission from the general cultural standpoint, offered to lend the support of his official position to further our objects in every



LLAMAS IN BOLIVIA

way possible. Dr. Mariaca, in his capacity as Dean, called a meeting of the surgeons and surgical specialists of the medical school faculty to confer with me. There was quick action. Our South American brethren are not always as dilatory as we have been led to believe. It was announced that the conference would be held in the Rectorate of the National University the next afternoon at four o'clock.

Señor Lugones turned over his conference rooms and there in the Rectorate of the National University of San Andrea, on February 5 at the designated hour, four p. m., Dr. Mariaca, called together the group of leading surgeons of La Paz to hear the message of their colleagues from North America. Dr. Mariaca who is not a surgeon then turned the meeting over to the assembled surgeons and they proceeded to organize, following the parliamentary procedure with which we are all familiar.

Dr. Claudio Sanjines—Dr. Felix Veintemillas

DR. Claudio Sanjines, who is Professor of Surgery in the University and perhaps the most widely known surgeon in Bolivia, was elected President and Dr. Felix Veintemillas, a



MOUNTAIN SCENE IN BOLIVIA

younger man, a nose and throat specialist, was elected Secretary. Having received the letters and credentials from the College, Dr. Sanjines welcomed me to Bolivia in the name of the surgical fraternity of that republic and expressed the satisfaction felt by himself and his colleagues at the invitation to co-operate in the work of the College. The discussion then became general, views were exchanged quite freely, and many questions bearing upon different phases of medical organization in North America were put to me. Finally the complete and detailed plan as outlined in the letter of Dr. Franklin H. Martin, Director-General of the American College of Surgeons, to the surgeons of Bolivia was the subject of marked approbation, offering as it did Fellowship to their surgeons on an equal basis and governed by the same requisites as in North America. The plan of affiliation was put to a vote and passed unanimously.

Committee on Credentials

DR. Sanjines was made President of a permanent Committee on Credentials to carry along the work of the College in Bolivia. In his speech of acceptance he again expressed his hearty approbation of the work and told of his desire to interest the surgeons in the other cities of the republic. Among those recommended for Fellowship in the College is Dr. Renato A. Riverin.

Interest in North American Medical Publications

REFERRING to the section of Dr. Martin's letter which asked for suggestions to foment a closer relationship between the surgeons of the two continents, he stated that in the name of the surgeons of Bolivia, he would like to suggest that inasmuch as the American College of Surgeons was now Pan-American in its scope, its publications, or at least the more important ones, be translated into Spanish. Also that the College encourage the translation of our best textbooks into Spanish, as the South American surgeons are only slightly familiar with our books. He mentioned the fact that Keen's *Surgery* and Kelly's *Gynecology* had been translated and the quality of these publications had made them eager to obtain translations of more of our important works. It is a pleasant duty to transmit these messages from the surgeons of Bolivia to their colleagues in the United States and Canada and to express satisfaction at their approval of the plan of affiliation.

Dr. Daniel Bilboa—Hospitals

ON the following days of my stay in La Paz, in company with Dr. Sanjines, Dr. Veintemillas, and Dr. Daniel Bilboa, another member of the committee that had been created, I visited a number of the hospitals and private clinics. The hospital situation in LaPaz is far from satisfactory. The number of beds is inadequate, a state of affairs with which we are not unfamiliar in this country. The condition of the hospital situation is well recognized by the local profession. Many of the present hospital buildings are old and lack modern requisites for a center of this size. The Municipality has under construction a new hospital which, when finished, will contain all departments and will be a very modern and creditable institution of about seven hundred beds. It is ideally located on the outskirts of the city in a suburb well named Miraflores, which might be translated "A Vision of Flowers," the flowers of course in this latitude being in bloom throughout the year. At present this hospital has in general use about two hundred beds and a separate contagious disease department of ample capacity.

Typhus Epidemic

THERE had been an outbreak of typhus in and around LaPaz shortly before my arrival and I had an opportunity to see a number of cases of this interesting disease in various stages of its progress, from the early eruption to the point of convalescence, this being my first experience with the disease which is fortunately rare in our country.

A young American surgeon of great promise, Dr. Charles Eastman, in charge of the hospital at the tin mining operations of a large American corporation, was one of the victims of this recent epidemic. As is well known, the disease is transmitted by the bite of a louse, and Dr. Eastman, in his zeal for the care of his patients and reckless of his own welfare (as Mr. Graham, the general manager of the company, told me), in order that he might better care for the Indian victims of the disease and also from a strong scientific interest in the study of the malady, often slept in the native huts which were located in remote places, exposing himself to infection without thought of himself. He is looked upon by the men who were familiar with him and with his work as a martyr to the cause of science. We have reason to be proud of the record of this fellow countryman of ours in a far land.



STREET MARKET PLACE IN LA PAZ

National Hygienic Laboratory—Dr. Nestor Morales

THE National Hygienic Laboratory of Bolivia is located at La Paz. Its location is adjacent to the Miraflores Hospital. Under the directorship of Dr. Nestor Morales this institution has gained an enviable reputation in all of that part of South America. The various sera and vaccines which are recognized by the profession as of value in treatment and diagnosis are prepared in an excellent manner and under thorough scientific supervision in a government laboratory, whence they are distributed.

The lack of adequate hospital facilities in Bolivia as elsewhere has been due in a large part to absence of a definite governmental policy with regard to scientific matters. As in our own country, political interference with the personnel of hospital staffs and of university faculties delays progress.

The surgeons of Bolivia have the right spirit; they have vision and ambition for the best things in scientific progress; the leading men are all young and active, they have been trained abroad, and they are cognizant of the best things in scientific progress outside of the boundaries of their own country. Under their leadership Bolivia is undoubtedly at the beginning of great accomplishments. As in Ecuador, a

number of them expressed their intention of accepting the invitation to attend the Clinical Congress in Philadelphia in October, 1921. The value of this affiliation and its far-reaching influence will be more evident as time goes on.

RETROSPECT

I LOOK back upon my visit to Ecuador and Bolivia with great pleasure. The press and that portion of the public with whom I came in contact treated my mission as something of real importance. The newspapers in both countries attached enough significance to it to make it a matter of front-page publicity and the profession received our invitation with enthusiasm. There was the feeling of having received a genuine and cordial welcome, and I have remembrances of hours well spent in the company of courteous, warm-hearted professional colleagues. The welcome was, of course, in no sense a personal one, but a quick and hearty recognition of the hand of professional brotherhood extended to the surgeons of Ecuador and Bolivia by the surgeons of the United States and Canada. It is the beginning of a relationship which will endure to the mutual benefit of all and to the advancement of the Art.



MOUNTAIN AUTO ROAD IN BOLIVIA

SUMMARY OF FACTS

Historical, Geographical, Political, Social and Industrial

SUMMARY OF FACTS

HISTORICAL, GEOGRAPHICAL, POLITICAL, SOCIAL AND INDUSTRIAL

ARGENTINA

1. HISTORICAL REVIEW: On February 2, 1535, Don Pedro de Mendoza, a Spaniard, founded on the right bank of the Rio de La Plata the town of Buenos Aires. He was appointed Governor of the territories. However, it was not until 1580 that the town was permanently established. At about this time other towns in Argentina were founded, among them San Juan, Mendoza, and San Luis. Buenos Aires remained under Spanish domain until 1806, when it was occupied by the English. But within a month the Spanish regained possession of the territory, which it retained until Argentina seceded from Spain and named its directorate on May 25, 1810. In 1820 the directorate was dissolved, and each province governed itself according to its own tastes. A few months afterward a new Congress, held at Buenos Aires, chose a new President of the Confederated Republic of all provinces. The revolutionary war actually lasted until 1822, when, through the victories of General San Martin in Chile and Peru, where Spanish forces were still fighting after being defeated in Argentina, the colonists firmly established their independence. The United States was the first nation to recognize this independence, and when it was threatened by the "Holy" alliance, President Monroe propounded his famous doctrine in defense of the young Republic. Argentina originally included Bolivia, Paraguay, and Uruguay.
2. AREA: 1,153,110 square miles. 7 inhabitants to the square mile. Second largest of South American republics. As great as United States east of the Mississippi, and Minnesota, Iowa, Missouri, and Arkansas.
3. PHYSICAL CONTOUR: 2,227 miles long; 911 miles at widest point; 202 miles at narrowest point. Bounded on north by Bolivia and Paraguay, on east by Brazil, Uruguay, and Atlantic Ocean, and on south and west by Chile. Western boundary mountainous; eastern land, pampas. Lies in latitude 22° to 56° south; longitude 53° to 57° west.
4. PRINCIPAL BODIES OF WATER: Five river systems with about 25 tributaries. Principal Lakes: Nahuel-Huapi in extreme south, Buenos Aires, San Martin, Viedma.

5. RAILWAYS: 22,500 miles of railway open to traffic. Only a small portion state-owned. 500 passenger trains leave Buenos Aires daily. Ninth country in the world in railway development.
6. METHOD OF TRAVEL: Principally by railroad.
7. CLIMATE: Average summer temperature about 77°F., winter 40°F. Warmest month, January, coldest month, July. Climate varies in different parts of the country, as it extends from the Torrid, through the Temperate, and into the Frigid Zone.
8. FORM OF GOVERNMENT: Similar to United States, with few minor exceptions.
   President and Vice President: Hold office for six years and are not eligible for re-election to these posts for the term immediately succeeding.
   Senators: Thirty, two for each province, and two for the Federal Capital. Serve nine years, one-third retiring each three years.
   Chamber of Deputies: One-hundred and twenty members, one for each 33,000 inhabitants. Serve for four years, one-half retiring each two years.
   Cabinet: Ministers of Interior, Foreign Affairs, Finance, Justice and Public Instruction, Agriculture, Public Works, War, and Marine.
9. PRESIDENT AND VICE-PRESIDENT: President, Señor Hipolito Irigoyen; Vice-President, Señor Dr. Bento Villanueva. Terms expire October 12, 1922.
10. PROVINCES AND TERRITORIES:

Provinces:	Territories:
Buenos Aires	Chaco
Catamarca	Chubut
Córdoba	Formosa
Corrientes	Los Andes
Entre Rios	Misiones
Jujuy	Neuquen
La Rioja	Pampa Central
Mendoza	Rio Negro
Salta	Santa Cruz
San Juan	Tierra del Fuego
San Luis	
Santa Fé	
Santiago del Extero	Federal District:
Tucumán	Buenos Aires

11. PRINCIPAL CITIES:

Buenos Aires (Capital)	1,637,155
Rosario	222,592
LaPlata	90,436
Tucumán	91,216
Córdoba	104,894
Bahia Blanca	44,134

12. PRINCIPAL PORTS: Buenos Aires, Bahia Blanca, Port Madryn.

13. POPULATION: 8,279,159. 4,440,367 males; 3,838,792 females. 2,000,000 less than population of state of New York. One-fifth of total population reside in Buenos Aires, which is practically as large as Philadelphia. Next to Paris, Buenos Aires is largest Latin city in the world.
14. INHABITANTS: Argentines, Italians, Spanish, French, Uruguayans, Russians, Austrians, Ottomans, Swiss, German, English—importance in order named.
15. INDUSTRIES AND MANUFACTURE: Pastoral and agricultural industries, mainly. Cultivation of sugar cane and manufacture of wines secondary.
16. IMPORTS AND EXPORTS: Exports exceed those of Brazil by 25 per cent. In 1918 United States supplied 33.8 per cent. of total imports.
17. EDUCATION: Primary, secondary, and superior. Primary education compulsory for all children from 6 to 14 years of any nationality whatever. Schools are secular, but ministers may teach religion out of class to the children whose parents wish it. Public school education gratuitous. Primary schools, 6 years; secondary schools, 6 years; medical course, 7 years.
18. RELIGION: All religions tolerated. No state religion, although Catholic religion is supported by state and predominates.
19. LANGUAGE: Spanish is the universal language. French and English follow in importance.
20. HOTELS:
    Buenos Aires: Plaza, Palace, Majestic, Savoy, Grand.
    Rosario: Italia, Savoy, Central, Mayo, Britannico, Royal, Universal.
    La Plata: Argentino, Mosquera, Marimi, Sportsman, Commercio.
    Tucumán: Savoy, Artiga Frascata, Lyon, Paris, Central.
    Córdoba: Plaza, San Martin, Victoria, Grand, Italia.
21. COMMERCIAL ESTABLISHMENTS: Buenos Aires: Harrods, Gath and Chaves, A la Ciudad de Londres, Al Progreso, A la Ciudad de Mejico, A la Tienda San Juan, Avelino Cabezes, Co-operativo Nacional de Consumos, English Book Exchange, Bon Marche, Louvre.
22. HOSPITALS:
    Buenos Aires: P. Piñero, Clinical, German, Italian, Rivadavia, Military, Rawson, San Roque, Spanish, De la Boca, Flores, Pirovano, French, North, New Italian, Children's, Mercedes, Foundling, Isolation, British, Hospital for Insane, Tuberculosis, Ophthalmic, Liniers, Teodora Alvarez, Cosme Argerich, Muniz, J. A. Fernandez, J. M. Bosch, Alien.
    Rosario: Caridad, Rosario, Español, Italiano Garibaldi.
23. MEDICAL SCHOOLS: National Universities at Buenos Aires, LaPlata, Córdoba, and Rosario.
24. PRINCIPAL POINTS OF INTEREST: Buenos Aires:
    Streets, Drives, and Public Parks: Plaza Congreso, Plaza de Mayo, Avenida de Mayo, Calle Callao, Avenida Florida,

Plaza San Martin, Calle Corrientes, Plaza Lavalle, Plaza Italia, Plaza Rodriguez, Peña, Palermo Park, Mar del Plata (bathing beach).

Buildings: Hall of Congress, President's Palace, Art Gallery, Colon Theater, Opera House, Cathedral (contains tomb of San Martin), Jockey Club, National Library, National Historical Museum, La Prensa (home of newspaper of that name), Gabria Guemas (office building), Reservoir.

Other Places of Interest: Central Market, Port of Buenos Aires, Racoleta Cemetery, Hippodrome, El Tigre (checker-board formed by natural channels), La Plata (Zoölogical Gardens, National University, Astronomical Observatory, Museum), American Club, and numerous clubs with facilities for sports of all descriptions. Many beautiful monuments appear in all plazas and parks.

25. STREET AND MOTOR CARS: To all parts of the larger cities, and to the suburbs.
26. COINS: Monetary unit—Gold peso, normal value .9648 United States.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: 12 centavos ¾ ounce, 12 centavos each additional unit or fraction thereof. From United States to Argentina: 5 cents for first ounce, 3 cents for each additional ounce.
29. MAIL TIME: About 25 days from New York.
30. CABLE RATES: 50 cents a word from New York or New England.
31. WIRELESS: Ano Nuevo, Cabo Virgenes, Campo Mayo, Darsena Norte, Darsena Sud, Faro Mogotes, Faro Recalada, Formosa, La Paz, Mendoza, Ministerio de Guerra, Puerto Militar, Rio Santiago, Ushuaia, Posades, Iguazu, Rio Grande, Zarate, and Punta Delgada.
32. DIFFERENCE IN TIME: 1 hour, 2.4 minutes east of New York.
33. HOLIDAYS: January 1, New Year's Day; May 25, Independence Day; July 9, Proclamation of National Independence; November 11, San Martin's Day (Buenos Aires only); December 25, Christmas Day. Many other Church Holidays.
34. FLAG: Three horizontal stripes, light blue, white, and light blue. Sun with rays in center of white stripe.
35. PUBLICATIONS: About 450 publications regularly issued; range from few thousand to over 100,000 circulation. Practically all published in Buenos Aires.
36. DIPLOMATIC SERVICE: Exchange Ambassador.
37. BANKS:

Buenos Aires: National City Bank of New York; First National Bank of Boston; Mercantile Bank of the Americas; American-Foreign Banking Corporation; Anglo-South American Bank, Ltd.; Royal Bank of Canada.

Bahia Blanca: Anglo-South American Bank, Ltd.

Córdoba: London-River Plate Bank.

Rosario: National City Bank of New York; Anglo-South American Bank. Ltd.

Tucumán: London and River Plate Bank.

BOLIVIA

1. HISTORICAL REVIEW: Prior to the revolt to Spanish rule, known as the Province of Charcas (upper Peru). Named for Simon Bolivar, the great Liberator. Commencement of the war for liberation signalized by the Battle of Titicaca in 1811. Four years of warfare freed the country from Spain (see also Argentina). First general assembly of Deputies held in 1825.
2. AREA: 708,195 square miles. 3.2 inhabitants per square mile. Most sparsely settled of South American republics. Twice the size of Texas. Equal to all the states east of the Mississippi except New England states. Fourth largest of South American countries.
3. PHYSICAL CONTOUR: Inland republic, reached from Mollendo, Peru, and Arica and Antofagasta, Chile. Bounded by Brazil, Peru, Chile, Argentina, and Paraguay. Two great chains of the Andes divide Bolivia into many valleys and basins. Bolivian table land comprises about 65,000 square miles lying between the two ranges. Latitude 10° to 22° south; longitude 60° to 70° west.
4. PRINCIPAL BODIES OF WATER: Lake Titicaca, 5,187 square miles. Rivers: Paraguay, 1,050 miles; Itenez, 1,000 miles; Beni, 1,000 miles, and many others.
5. RAILWAYS: 1,350 miles of railroad in Bolivia, 275 miles under construction.
6. METHOD OF TRAVEL: 12,000 miles of navigable river, and railways.
7. CLIMATE: Almost entirely within Torrid Zone, but climate not tropical owing to great altitude. Majority of population lives at an altitude of from 8,000 to 16,000 feet above sea level. Temperature ranges from 74° to 50° F.
8. FORM OF GOVERNMENT: Republic.
   President and two Vice-Presidents elected by popular vote for a term of four years. President cannot be re-elected for succeeding term.
   Senate: Sixteen Senators elected by people for six years, renewed by thirds every two years.
   Representatives: Seventy-two, elected by people for four years.
   Cabinet: Ministers of Foreign Affairs and Worship; Interior and Development; Finance; Justice and Jurisprudence; Public Instruction and Agriculture; War and Colonization.
9. PRESIDENT: Señor José Gutferrez Guerra. Term expires 1921.
10. DEPARTMENTS AND TERRITORY:
    Departments:

Chicquisaca	Oruro
Cochabamba	Potosi
El Beni	Santa Cruz
El Chaco	Tarija
La Paz	

    Territory: Colonial.

11. PRINCIPAL CITIES:

La Paz	82,000
Cochabamba	30,000
Sucre (Capital)	25,088
Potosi	25,000

12. PRINCIPAL PORTS: No sea port.
13. POPULATION: 2,093,925 (estimated).
14. INHABITANTS: In 1900: 920,864 Indians; 486,018 mixed; 231,088 whites; 170,936 unclassified; 3,945 negroes.
15. INDUSTRIES AND MANUFACTURE:
    Mining: Tin, wolfram, copper, tungsten, silver, and bismuth (world's most important source of supply).
    Agriculture: Wheat, corn, fruits, rubber.
    Cattle Raising: Southeastern portion of country destined to become important cattle raising country. 5,000,000 acres uncultivated.
16. IMPORTS AND EXPORTS: In 1918 United States supplied 37 per cent. of imports and took 41 per cent. of exports.
17. EDUCATION: Free and compulsory; state aided. About 600 schools and 45,000 pupils.
18. RELIGION: State recognizes only Roman Catholic church. Other religions tolerated.
19. LANGUAGE: Spanish.
20. HOTELS:
    La Paz: Paris, Guilbert, Whitehouse, Hartlieb, Park, Sportsman, Gran.
    Sucre: Hispaño, Americano, España, Colon, Uguin, Japones, Burgos.
    Cochabamba: Union, Sucre, Americano, Gran, Continental, Comercio, Central.
21. COMMERCIAL ESTABLISHMENTS:
22. HOSPITALS: *La Paz:* Miraflores (new), Municipal (old).
23. MEDICAL SCHOOLS: La Paz and Sucre.
24. PRINCIPAL POINTS OF INTEREST:
    La Paz: The Alameda, Calle Comercio, Capitol Building, Government and Justice Building, Ayacucho Street, Market.
    Sucre: Governor's Palace.
    Lake Titicaca: Highest fresh water lake in the world. Boats (called balsas and callapos) used by Indians on lake are very interesting.
    Volcanoes: Illimani and Sorati among highest in world.
    Inca Ruins: Short distance from La Paz, world famous.
    Lake Pospo.
    Prehistoric ruins near Cuzco. Ruins of Vilanota and Choquequiras.
    Bolivian mines, most famous Potosi.
25. STREET AND MOTOR CARS: Street cars and taxicabs.
26. COINS: Gold standard. Boliviano, equals $0.39 United States. Paper notes in denomination of 1, 5, 10, 20, 50, and 100 bolivianos.

27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: From Bolivia to United States: 10 centavos for ¾ ounce; 5 centavos each additional unit or fraction.
From United States to Bolivia: 5 cents for first ounce; 3 cents for each additional ounce.
29. MAIL TIME: 20 to 25 days from New York.
30. CABLE RATES: 50 cents a word from New York or New England states.
31. WIRELESS: Viacha, Trinidad.
32. DIFFERENCE IN TIME: La Paz, 25 minutes east of New York.
33. HOLIDAYS: January 1, New Year's Day; July 15, 16 and 17, La Paz Municipal; August 5, 6, and 7, National Holidays; Shrove Tuesday, Good Friday, Corpus Christi, August 1, November 1, December 25.
34. FLAG: Three horizontal stripes—red, yellow, and green.
35. PUBLICATIONS: Several newspapers, but none in English.
36. DIPLOMATIC SERVICE: Exchange Minister.
37. BANKS: *La Paz and Sucre:* Banco Mercantile.

BRAZIL

1. HISTORICAL REVIEW: A Portuguese navigator usually given credit for having discovered Brazil in 1500, landing not far from the site of Bahia, although several other Portuguese navigators had touched the Brazilian coast some years before. No attempt was made to settle the country until 1549, when Thomas de Souza was appointed Governor General, naming Brazil from red dye wood found in the forests.

   The Portuguese crown divided the country, making grants to Portuguese nobles who were to settle and colonize and receive a number of Indian slaves in addition to the land. To prevent the Indians from being enslaved, the Jesuits who came with de Souza recommended the importation of African slaves, thousands of whom were imported from Africa during the sixteenth and seventeenth centuries.

   Between 1555 and 1640 the country suffered numerous invasions from the French, the Dutch, and the British. In 1631 the Dutch took possession of Pernambuco and gradually extended their power over a considerable portion of Brazil. In 1648 the Dutch were forced to abandon the country. At that time Brazil became a vice-royalty, with Rio de Janeiro as the capital.

   In 1808, when Napoleon invaded Spain and Portugal, King John of the latter country retired to his American kingdom. He established schools, and in general promoted the interests of his colony. When he returned to Portugal in 1821, he appointed his eldest son, Dom Pedro, regent of Brazil. Dom Pedro encouraged and fostered the movement for independence from Portugal, and in September, 1822, he formally proclaimed Brazil free and independent. In 1830 he was solemnly crowned emperor of Brazil. He reigned until 1831, and his son until 1889, when the people of Brazil resolved to change their form of government from a monarchy to a republic. This was accomplished without bloodshed in 1889, when the emperor abdicated and the Republic of Brazil was proclaimed.

2. AREA: Largest South American country. Fourth largest in the world. 3,290,564 square miles. 2.8 inhabitants to the square mile. Greater than the United States, excluding Alaska; 16 times as large as France.

3. PHYSICAL CONTOUR: Elevated plateau, broken up by numerous navigable rivers, the country being divided by two main water heads, the Amazon River in the north, and the River Plate in the south.

   Four main series of mountain ranges: Andes, northwest corner; Central, between Amazon and River Plate; Northern, borders of Venezuela and Guianas; Coastal, extending from Bahia to Uruguay, close to the Atlantic.

   Shore line of 5,000 miles on Atlantic Ocean.

Latitude 4°20′ north to 33°45′ south; longitude 34°40′ and 73°15′ west.

Bounded by all countries in South America except Chile.

4. PRINCIPAL BODIES OF WATER: Rivers: Amazon (¾ length of Mississippi and Missouri Rivers combined. One island in the River as large as Massachusetts. Navigable almost in its entirety). Fifty-five of the largest rivers of the world in Brazil 33 wholly or largely in Brazil. Lakes: Patos and Mirim.
5. RAILWAYS: 15,248 miles of railroad open to traffic, operated by the government, the state, private companies under federal control, and private companies exclusively.
6. METHOD OF TRAVEL: By railroad and 27,000 miles of navigable river. While bordering on all countries except Chile, no direct railroad connection except with Uruguay.
7. CLIMATE: Climate comparatively good for a tropical country; seasons opposite to our own. In Amazon Valley, owing to insect-born diseases, climate is very unhealthy.
8. FORM OF GOVERNMENT: Similar to United States, with slight variations. Federal Union of 21 states, each with its own autonomous government and organization.

   President: At head of Federal Union, elected by direct vote on March 1 for four years. Takes office November 15. Ineligible for re-election for two succeeding periods.

   Vice-President: Elected in same manner under the same qualifications. Ex-officio President of the Senate. In event of vacancy of the presidency during the first half of his office, he succeeds him; but if during second half, new election is held.

   Senate: Consists of 63 members, three from each state and three from the federal capital; elected by direct male vote for nine years, one-third retiring every three years.

   Chamber of Deputies: Consists of 212 members, one for every 70,000 inhabitants. Elected for three years.

   Cabinet: 7 members: Ministers of Finance; Interior; Public Works and Industry; Agriculture and Commerce; Foreign Affairs; War; and Marine. Chosen by President, and may not be members of the Senate.
9. PRESIDENT AND VICE-PRESIDENT: President, Dr. Epitacio de Silva Pessôa; Vice-President, Dr. Delfin Moreira da Costa Ribeiro. Terms expire November 15, 1922.
10. STATES:

Alajoas	Minas Garaes	Rio Grand do Sul
Amazonas	Para	Santa Catharina
Bahia	Parahyba do Norte	São Paulo
Ceara	Parana	Sergipe
Espirito Santo	Pernambuco	Aere (Under Federal
Goyaz	Piauhy	Government)
Maranhao	Rio de Janeiro	Rio de Janeiro City
Matto Grosso	Rio Grand do Norte	(Federal District)

11. PRINCIPAL CITIES:

Rio de Janeiro (Capital)	1,000,000
São Paulo	700,000
Bahia	280,000
Recife (Pernambuco)	250,000
Belém do Para	200,000
Porte Alegre	150,000

12. PRINCIPAL PORTS: Rio de Janeiro, Santos, Bahia, and Pernambuco.
13. POPULATION: 24,308,269. 12,472,595 males; 11,835,674 females.
14. INHABITANTS: Portuguese predominate; Spanish, Italian, German. Large proportion of negro blood. 600,000 Indians (savages) in Amazon area.
15. INDUSTRIES AND MANUFACTURE:
    Agriculture: Coffee (72 per cent. of world's total production from Brazil; 80 per cent. of crop from São Paulo; United States takes about 75 per cent. of Brazil's coffee); rubber, maté, cotton, leather, tobacco, cacao, skins, timber.
    Minerals: Manganese, gold, diamonds, and iron.
    Cattle Raising: Increasing in importance.
    Manufacture: Weaving and textiles.
16. IMPORTS AND EXPORTS: In 1918 United States supplied 35 per cent. of imports, and took 34 per cent. of exports.
17. EDUCATION: Central government has been prevented by constitutional restrictions from making education compulsory in the states; but some of the latter have taken this step, and wherever the government can offer it at all and make it free, education is free. Distributed unevenly throughout the states are more than 13,000 schools. There is no national university. The question of secondary education in Brazil is one of extreme gravity.
18. RELIGION: Absolute equality among all forms of religion, but all excepting 100,000 are Roman Catholics.
19. LANGUAGE: Portuguese.
20. HOTELS:
    Rio de Janeiro: Palace, Central, Internacional, Avenida.
    Bahia: Sul Americano, Meridonial, Harboard, Kloppenburg, Avenida, Brazil.
    Pernambuco: Americano, Commercial, Bunn, Recife, Parque, Continental.
    São Paulo: Sportsman, Suisso, D'Oeste, Majestic, Bella Vista, Bristol, Grande, Commercio, Continental, Palace.
21. COMMERCIAL ESTABLISHMENTS: Innumerable interesting shops in Rua Ouvidor, Avenida Niemeyer, and other streets which cross the former in Rio de Janerio; also many shops in São Paulo.
22. HOSPITALS:
    Rio de Janeiro: Central do Exercito, Beneficencia Portugueza, Ordem 3a da Penitencia, Crianças, S. João Baptista, Carmo, Beribericos, Lazaros, Evangelico, Nossa Senhora da Saude, Paula Candido, Santa Casa de Misericordia,

S. Francisco de Paula, S. Sebastiao, Saude do Dr. Eiras, Saude São Sebastiao, Nacional de Alienados, Instituto Pasteur, Liga Contra a Tuberculose, Maternidade, Strangers, Nossa Senhora do Soccorro, Marinha, Copacabana, São João de Deus, Nossa Senhora das Dores, Hahnemanniano, Pró-Matre, Dom Pedro II, Cruz Vermelha, Internacional, Crissiuma Filho, Dr. Poggi, Dr. Abilio, and Dr. Pedro Ernesto.

São Paulo: Municipal, Maternity, Sanatoria Sta. Catharina, Instituto Paulista.

23. MEDICAL SCHOOLS: Faculties of Medicine at Rio de Janeiro, São Paulo, Curitiba, Bahia, and Porte Alegre.
24. PRINCIPAL POINTS OF INTEREST: *Rio de Janeiro:*

Mountains: Sugar Loaf, Corcovado, Tijuca, Vista Chineza, Quinta da Boa Vista, Meza da Imperador, Gavea.

Drives: Santa Thereza (the aqueduct), São Silvestre, Sumaré.

Streets: Rua Payssandú (palm street), Mangue Canal (with quadruple palm avenue), Rua Beira Mar, Avenida Rio Branco, Rua Ouvidor (shopping), also Avenida Niemeyer.

Buildings: Cathedral, Mint, Municipal Theater, Monroe Palace, Academy of Fine Arts, National Library, Congressional Building, Castle São Sebastiao, Oswaldo Cruz Institute, National Museum (formerly Emperor's Palace), President's Palace.

Parks and Gardens: Botanical Gardens, Zoölogical Gardens, Praça Republica Gardens, Public Parks; many plazas containing beautiful statues.

Trips: On ferry to Nictheroy and other islands in the bay. Petropolis, where are located most of the summer residences of diplomatic representatives in Brazil, also President's summer palace.

Beaches: Botafogo, Copacabana, Ipanema, Leme, Leblon, Vermelhe, Formosa, Santa Luzia, Lapa, Gloria, Flamingo, Avenida Atlantica.

Clubs: American Country, Jockey, Navy, Fluminense, and many others.

São Paulo: Governor's Palace, Municipal Theater, Upiranga Museum of Art, beautiful clubs and public buildings, Snake Farm (Butantan), coffee plantation (Campiñas), Mackenzie College (organized by a Canadian). *Streets:* Rua São Prente, Quinze de Novembro, Direita. Parque Jaraguara, Villa Marianna, Jardim America, Jardim d' Aclimataçao, Jardim da Luz, Ponta Grande, St. Anne, Cantareira, Reservoir, Freguesia d'o, Largo do Thesouro, Largo do Palacio.

Santos: Drive along the beach, São Vincente, José Minino, Bogueirao, Praia Grande, Guarujá (summer resort).

25. STREET AND MOTOR CARS: To all parts of cities and suburbs.
26. COINS: Gold standard. Unit, gold milreis equals $0.5463 United States; paper milreis equals $0.3292 United States.
27. WEIGHTS AND MEASURES: Metric system.

28. POSTAGE: 200 reis, ½ ounce; 200 reis each additional unit. To Brazil from United States: 5 cents for first ounce, 3 cents for each additional ounce.
29. MAIL TIME: 19 days from New York.
30. CABLE RATES: 85 cents a word from Rio de Janeiro to New York or New England states.
31. WIRELESS: Stations at: Abrolhos, Amaralina, Anhatomirim, Babylonia, Cruzeiro do Sul, Fernando de Noronha, Ilha das Cobras, Ilha do Governador (Rio de Janeiro), Ilha Raza, Junccao, Landario, Lagoa, Manaos, Monte Serrat, Olinda, Para, Porto Velho, Rio Branco, Santarem, São Thome, Senna Madureura, Tarauaca.
32. DIFFERENCE IN TIME: 2 hours 3.2 minutes east of New York.
33. HOLIDAYS: January 1, New Year's Day; February 24, Promulgation of Constitution; April 21, Tiradentes Day; May 3, Discovery of Brazil; May 13, Abolition of Slavery; July 14, Liberty Day; September 7, Independence Day; October 12, Discovery of America; November 2, Memorial Day; November 15, Proclamation of the Republic; December 25, Christmas Day.
34. FLAG: Green back-ground with large yellow diamond; small blue center in diamond on which appear the words "Order and Progress."
35. PUBLICATIONS: Numerous publications, regularly issued. Brazilian-American (weekly publication) particularly interesting to Americans.
36. DIPLOMATIC SERVICE: Exchange Ambassador Extraordinary and Plenipotentiary.
37. BANKS: *Bahia:* National City Bank of New York.
Para: Mercantile Bank of the Americas; London and Brazilian Bank, Ltd.
Pernambuco: Mercantile Bank of the Americas; National City Bank of New York.
Porte Alegre: Anglo-South American Bank; National City Bank of New York.
Rio de Janeiro: National City Bank of New York; American-Foreign Banking Corporation; Royal Bank of Canada.
Rio Grand do Sul: Anglo-South American Bank; London and Brazilian Bank, Ltd.
Santos: National City Bank of New York.
São Paulo: National City Bank of New York; London and Brazilian Bank, Ltd.

CHILE

1. HISTORICAL REVIEW: The dominion of the Incas of Peru included the northern and central portions of Chile. In 1535 the Spanish congress of the Inca Empire sent its first expedition southward along the Pacific Coast. But the task of adding this territory to the Spanish possessions in Peru and upper Peru (Bolivia) was not undertaken in earnest until 1541, nor was it brought to a successful conclusion without desperate fighting in the second half of the 16th century. Pedro de Valdivia suffered defeat and death in 1553 at the hands of the Union Indian leader. The Araucanians offered a stubborn resistance, and even as late as the 18th century they retained a large part of the country.

   In September 1810 was formed the first national government to rule the country during the captivity of the King of Spain, whom the French held as prisoner. From that time forward the design to achieve independence was never relinquished, though the years immediately following were of a character to discourage patriotic aspirations. The Chileans were defeated and compelled to return to nominal subjection, but the final success was won with the help of the Argentine troops under General San Martin, and the independence of the country was proclaimed in 1818. A constitution was adopted in 1824, and finally shaped in 1833 to substantially its present form. Independence was recognized by a formal arrangement with Spain and embodied in the treaty of 1844.

   In 1865, however, a war broke out between the mother country and Chile and Peru, hostilities continuing until 1869. After an interval of peace, the war on the Pacific began. In 1879 Chile declared war on both Bolivia and Peru. The Bolivian frontier was settled by a treaty of October, 1904, but the plebiscite between Peru and Chile, which was to have been held in 1893, has not yet taken place.

2. AREA: 292,590 square miles. 11 inhabitants to the square mile. Larger than New England states, with the addition of New York, New Jersey, Pennsylvania, Maryland, and Virginia. Seventh largest South American country.

3. PHYSICAL CONTOUR: Narrow strip of land between the Andes and the Pacific Ocean, running in the general direction of north and south for a distance of almost 3,000 miles. Width of the country varies from 65 to 250 miles. Divided into three regions: Mineral in north; agricultural and coal in center; timber and cattle in south. Latitude 17°15′ to 55°59′ south; longitude 66°30′ to 75°40′ west. Bounded on east by Argentina and Bolivia, on north by Peru, on south and west by Pacific Ocean. Northern portion of Chile arid; southern portion covered with vegetation, interspersed with a chain of small lakes. Aconcagua, highest point on western hemisphere, in Chilean Andes (22,422 feet high, an extinct volcano).

4. PRINCIPAL BODIES OF WATER: Rivers: Maullin, Bueno, Calle-

Calle, Cautin, Bio-Bio, Maulle; all navigable for short distances and for small vessels. Many small lakes in southern portion of country.

5. RAILWAYS: Railroads extend from north to south, and from east to west at Santiago, Valparaiso, Arica, and Antofagasta. All railroads owned by government with exception of few in the nitrate region. Six different gauges used range from 2 feet 6 inches to 5 feet 6 inches.
6. METHOD OF TRAVEL: Railroad exclusively in interior; Pacific Ocean on west coast.
7. CLIMATE: Varies in different parts of country, extending from Torrid, through Temperate, and into Frigid Zone. Two seasons, summer from September to April, and winter from May to August. Hottest months January and February. In northern part, climate hot throughout the year and very little rain. In extreme south, rain and cold predominate. Valparaiso like San Francisco; Santiago like Charleston, S. C.
8. FORM OF GOVERNMENT: Similar to United States, with slight variations.

   President: Executive officer, elected for five years, ineligible for re-election in immediately succeeding term. In event of presidency being vacated, Minister of Interior assumes office.

   Council of State: President of the Republic, and five members nominated by him.

   Senate: Thirty-seven members, 1 for each 30,000 inhabitants; hold office for six years; one-half retire every three years.

   Chamber of Deputies: One hundred and eighteen members, hold office for three years; elected by departments.

   Cabinet Members: Ministers of Interior, Foreign Affairs, Justice, Finance, War, and Public Works.

   Voters: All male citizens over twenty-one years of age. Must be able to read and write. Soldiers and sailors and policemen not qualified to vote.

9. PRESIDENT: Señor Arturo Alessandro. Term expires 1926.
10. PROVINCES:

Aconcagua	Concepcion	O'Higgins
Antofagasta	Coquimbo	Santiago
Arauco	Curico	Tacna
Atacama	Linares	Talca
Bio Bio	Llanquilmé	Tarapacá
Cautin	Malleco	Valdivia
Chiloé	Maule	Valparaiso
Colchagna	Nuble	Magalhaes (territory)

11. PRINCIPAL CITIES:

Santiago (Capital)	333,000
Valparaiso	180,000
Concepcion	69,776
Antofagasta	32,000

Iquique	44,000
Talcahuana	38,000
Punta Arenas	11,000

12. PRINCIPAL PORTS: Valparaiso, Antofagasta, Iquique, Arica, Talcahuana, Punta Arenas.
13. POPULATION: 3,249,279 inhabitants. 1,624,221 males; 1,625,058 females.
14. INHABITANTS: Great majority of population of European origin.
15. INDUSTRIES AND MANUFACTURE: *Mining:* Nitrate of soda (world's principal producer; contributes through duties levied 80 per cent. of entire revenue of Chile); copper, iron, coal (insufficient for needs of country). *Agriculture:* Fruits. *Manufacturing:* Insufficient for needs of country. Also make wines.
16. IMPORTS AND EXPORTS: United States, in 1918, supplied 46 per cent. of imports and took 61 per cent. of exports.
17. EDUCATION: Education in primary schools gratuitous but not compulsory. Medical course 7 years.
18. RELIGION: Roman Catholic religion maintained by state; but all religions are respected and protected.
19. LANGUAGE: Spanish.
20. HOTELS:
    Antofagasta: Londres.
    Valparaiso: Royal, Trocadero, Palace, Labelle.
    Santiago: Savoy, Grand, Oddo.
    Viña del Mar: Gran.
    Los Andes: Internacional.
21. COMMERCIAL ESTABLISHMENTS: Many interesting shops in all of the principal cities of Chile.
22. HOSPITALS: All hospitals under the jurisdiction of Junta de Beneficencia, no pay hospitals.
    Santiago: San Juan de Dios (emergency for men, 800 beds), San Francisco de Borja (for women, 900 beds), San Vincente de Paulo (700 beds for men, 120 for women), Salvador (600 beds for men, 600 for women), San José (350 beds for tuberculous patients), Niños (500 beds), Casa de Huerfanos (children), General Hospital (under construction 1921, 2,000 beds), Spanish Colony expect to build a private hospital, but not yet under way, German Private Clinic (25 to 30 rooms), Manuel Arriaran (600 beds), San Augustin, German, San Juañ de Dios.
    Salvador: Naval and Children's.
    Valparaiso: San Juan de Dios, San Vincente, San Augustin, San Apestin, Casa de Orates, Hospital de Niños, Alemar de Valparaiso, German, Ancud, and Talcahuano.
23. MEDICAL SCHOOLS: University of Chile, Santiago; Catholic University, Santiago.
24. PRINCIPAL POINTS OF INTEREST: Santiago.
    Streets and Parks: The Alameda (Chile's Hall of Fame), Plaza des Armes, Parque Cousiño, Avenida de las Delicias, Parque Forestal, Quinta Normal, Plaza Blanca Encalada.

Buildings: National Capital, Cathedral, Palace of Justice, Intendencia, University of Chile, Catholic University, Artillery Quarters, Arsenal, Military Academy, President's Palace, Palacio de Bellas Artes, Municipal Theater, National Museum, Jockey Club, Triumphal Arch, Cerro de Santa Lucia, and Cerro de San Cristobal.

Restaurants: Café Rio de Janeiro, Café Olympia.

Valparaiso: *Streets and Parks:* Avenidas Brazil, Juncal, Chacabuco, Maipu, Victoria, Independencia, Colon, Gran, Esmeralda, Cochrane, Prat. Playa Ancha, Plaza Victoria, Chilean Naval Academy.

Beaches: Miramar, Seaside Park, Montemar.

Viña del Mar (Summer Resort): Race course, bathing beach, casinos, tennis courts, golf course, auto ride to Concon.

25. STREET AND MOTOR CARS: Double-decked cars in Santiago and Valparaiso, upper story for second-class passengers. Horse cars in Iquique. Street cars and motor cabs in all principal cities.
26. COINS: Gold standard. Gold peso equals $0.356 United States paper peso equals $0.20 United States.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: Forty centavos ¾ ounce. 20 centavos each additional unit or fraction. From United States to Chile: 5 cents for first ounce, 3 cents for each additional ounce.
29. MAIL TIME: From New York: Santiago, via Panama, 32 days; Iquique, 26 days.
30. CABLE RATES: Fifty cents a word from New York or New England states.
31. WIRELESS: Arica, Iquique, Antofagasta, Coquimbo, Punta Arenas, Talcahuana, Valdivia, and Puerto Montt.
32. DIFFERENCE IN TIME: Valparaiso, 9.3 minutes east of New York.
33. HOLIDAYS: Day of each Presidential election; January 1, New Year's Day; May 21, Battle of Iquique; June 29, Sts. Peter and Paul; September 18, National Independence; September 19, Victories of Army and Navy; November 1, All Saints' Day; December 25, Christmas Day.
34. FLAG: Two horizontal stripes, white and red. Upper left-hand corner blue ground with white star in center.
35. PUBLICATIONS: Several publications in English and other languages, and innumerable daily, weekly, and monthly publications in Spanish.
36. DIPLOMATIC SERVICE: Exchange Ambassador.
37. BANKS:

Antofagasta: Anglo-South American Bank, Ltd.

Santiago: National City Bank of New York; Anglo-South American Bank, Ltd.

Valparaiso: National City Bank of New York; Anglo-South American Bank, Ltd.

COLOMBIA

1. HISTORICAL REVIEW: First visited by Spaniards in 1499. War of insurrection lasted from 1811 to 1824, the principal leader being the famous Liberator, Simon Bolivar. In Colonial days the Republic was called the Vice-Royalty of New Granada. It gained its independence from Spain in 1819, when it combined with Venezuela and Ecuador to form the Greater Colombia, which continued until 1832. Colombia was formerly in possession of the Panama Canal zone which has recently been separated to form the Republic of Panama.
2. AREA: 440,846 square miles. 11.5 inhabitants per square mile. Fifth largest of South American republics. Nine times as large as New York, twice as large as Texas.
3. PHYSICAL CONTOUR: Occupies northwestern corner of the continent, bounded on north by Caribbean Sea, on east by Venezuela, on south by Brazil and Ecuador, on west by Panama and Pacific Ocean. Has a coast line of about 3,100 miles on Caribbean Sea and Pacific Ocean. Three ranges of mountains, which extend in north-easterly to south-westerly direction, divide the country into as many sections. Latitude, 13° north to 4° south; longitude 67° to 79° west.
4. PRINCIPAL BODIES OF WATER: Rivers: Magdalena, Cauca, Atrato, and Orinoco.
5. RAILWAYS: Fifteen lines of railway, 740 miles. 466 miles 3-ft. gauge; balance standard gauge.
6. METHOD OF TRAVEL: Much of inland travel on rivers.
7. CLIMATE: Caribbean coast and eastern section tropical; center, temperate climate; Pacific coast section, tropical and temperate.
8. FORM OF GOVERNMENT: Republic.
   President: Elected by direct vote of people for a term of four years; ineligible for immediate re-election.
   Senate: Thirty-four Senators, elected directly by electors for four years.
   Representatives: Ninety-two elected by people, one for every 50,000 population; serve for two years.
   Ministers: Interior, Foreign Affairs, Finance, Treasury, War, Public Instruction, Commerce and Agriculture, and Public Works.
9. PRESIDENT: Señor Don Marcos Fidel Suarez, to serve until August 7, 1922.
10. DEPARTMENTS, INTENDENCIAS, AND COMISARIAS:

Departments:

Antioquia	Cauca	Panama
Atlantico	Cundinamarca	Santendar
Boyacá	Huila	Santendar, Norte
Bolivar	Magdalena	Tolima
Caldas	Mariño	Valle El

Intendencias:

Choco	Meta

Comisarias:

La Goajira	Caquetá	Urabá
Arauca	Putumayo	Juradó
	Vaupés	

11. PRINCIPAL CITIES:

Bogotá (Capital)	137,571
Medellin	65,547
Barranquilla	64,554
Cali	45,500
Cartagena	36,632
Manizales	34,720

12. PRINCIPAL PORTS: Barranquilla, Cartagena.
13. POPULATION: 5,071,101. 2,439,051 male; 2,632,050 female.
14. INHABITANTS: 50 per cent. white, mainly of Spanish descent; 50 per cent. mestizos, Indians and negroes.
15. INDUSTRIES AND MANUFACTURE:
    Agriculture: Coffee, sugar, cotton, cacao, fruits, bananas, cocoanuts, tobacco, medicinal plants.
    Mining: Platinum (second largest producer in the world), emeralds, gold, silver, coal, petroleum.
    Forestry.
16. IMPORTS AND EXPORTS: In 1918 United States took 72 per cent. of exports, supplied 56 per cent. of imports.
17. EDUCATION: Gratuitous but not compulsory. Nearly all secondary schools maintained or assessed by nation are entrusted to religious corporations of the Catholic church. Great bulk of population illiterate and backward.
18. RELIGION: Roman Catholic predominates, but other forms of religion permitted if exercised "not contrary to Christian morals nor to law."
19. LANGUAGE: Spanish.
20. HOTELS:
    Bogotá: Europa, Alemana, Froeser, Blume, Bogotá, Bolivar, Central, Cundinamarca, Metropolitano.
    Medellin: Europa, America, Marin, Lusitania, Central, Pension de Familia.
    Barranquilla: Gran Suiza, Pension Inglesa, La Mariana, Caracas, St. Germain, Americano, Imperial, Gran.
21. COMMERCIAL ESTABLISHMENTS:
22. HOSPITALS: *Bogotá:* Juan de Dios, Misericordia, and San José.
23. MEDICAL SCHOOLS: Bogotá, Medellin, Cartagena.
24. PRINCIPAL POINTS OF INTEREST:
    Bogotá: President's Palace, Independence Park, Cathedral, Municipal Theater, Calle Real, National Capitol, Bolivar Temple, Plaza Bolivar, and other artistic government buildings, statues, and attractive mountainous environment.
    Cartagena: Ancient wall to city and picturesque buildings of Spanish-Colonial architecture. Easily accessible.
    Santa Marta: Founded in 1525; house in which Bolivar passed away. Monument also near by. Great banana

plantations of United Fruit Company. Coffee plantations in Sierra Nevada.

Magdalena River: One of three most important rivers in South America, with numerous methods of transportation.

Emerald mines near Muzo.

Quindido Pass: One of the most wonderful passes through entire Andes.

Cauca Valley: Fertile and beautiful valley made famous by Jorge Isaacs in novel "Maria."

Snow Mountains: Santa Marta, Huila, Tolima, El Quindio.

Tequendema Falls near Bogotá.

25. STREET AND MOTOR CARS:
26. COINS: Gold Peso (100 centavos) equals $0.973 United States. Condor, 10 pesos; Double Condor, 20 pesos; Medio Condor, 5 pesos; Cuarto Condor, 2½ pesos. Silver: 50, 20, 10 centavos. Nickel: 5, 2, 1 centavos.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: From Colombia to United States: 5 centavos (gold) ½ ounce; 5 centavos each additional unit or fraction. To Colombia from United States: 5 cents for first ounce; 3 cents for each additional ounce.
29. MAIL TIME: Eleven days from New York.
30. CABLE RATES: 68 to 77 cents per word, depending upon destination in United States and Canada.
31. WIRELESS: Bogotá, Medellin, Santa Marta, Cartagena, Island of San Andres.
32. DIFFERENCE IN TIME: Three minutes east of New York.
33. HOLIDAYS: In addition to Church holidays, following are observed: January 1, New Year's Day; July 20, Independence Day; July 24, Birthday of Bolivar; August 1, Founding of Bogotá (Bogotá only); August 7, Battle of Boyaca; October 12, Discovery of America; November 1, Independence of Cartagena; December 25, Christmas Day.
34. FLAG: Three horizontal stripes: Upper one-half yellow, middle one-fourth dark blue; lower one-fourth, dark red. White star in center on body of blue, outlined in red.
35. PUBLICATIONS:
36. DIPLOMATIC SERVICE: Exchange Minister.
37. BANKS: *Bogotá:* Mercantile Bank of Americas; National City Bank of New York.

ECUADOR

1. HISTORICAL REVIEW: The Republic of Ecuador was constituted in 1830 in consequence of the civil war which separated the members of the orginal Republic of Colombia, founded by Simon Bolivar, by uniting the Presidency of Quito to the Vice-Royalty of New Granada (see Colombia). Present constitution was promulgated in December, 1906.
2. AREA: 116,000 square miles. As large as New England states and New York; twice as large as Illinois. 13 inhabitants per square mile. Also comprises Galapagos Islands 580 miles from mainland (five large and two small islands with an area of 2,870 square miles). Smallest South American country, excepting Uruguay.
3. PHYSICAL CONTOUR: On west coast of South America; bounded on north and north-east by Colombia; on south by Peru; on west by Pacific Ocean. Two parallel ranges of mountains from north to south five hundred miles in length divide the country into three distinct regions, with as many varieties of soil and climate. Latitude 2° north to 5° south; longitude, 73° to 81° west.
4. PRINCIPAL BODIES OF WATER: Amazon (navigable almost in entirety), Guagas (navigable 40 miles), Daule, and Esmeraldas Rivers.
5. RAILWAYS: 400 miles of railway.
6. METHOD OF TRAVEL: Roads of the country are for most part traversible only by mule. River navigation in agricultural district furnished by sidewheel and screw steamers on Guagas, Daule, and Vinces Rivers.
7. CLIMATE: West coast hot and humid throughout the year, although the Humboldt Current modifies this considerably. Inland, perpetually spring-like.
8. FORM OF GOVERNMENT: Similar to United States.
   President.
   Senators: Thirty-two, two for each Province; four years of service, elected by direct vote.
   Chamber of Deputies: Forty-eight members, 1 for each 30,000 population; two years' service, elected by direct vote.
   Cabinet: Ministers of Interior, Foreign Affairs, Public Instruction, Finance, and War.
9. PRESIDENT: Señor Luis Tamajo, to serve until August 31, 1924.
10. PROVINCES:

Azuay	Galápagos	Manabi
Bolivar	Guayas	Oriente
Cañar	Nubabura	Oro
Carchi	León	Pichimba
Chimborazo	Loja	Tungurahua
	Los Rios	

11. PRINCIPAL CITIES:

Guayaquil	93,851
Quito (Capital)	70,000

Cuenca	50,000
Riobamba	18,000

12. PRINCIPAL PORT: Guayaquil.
13. POPULATION: 1,500,000. One-fourth the population of Illinois.
14. INHABITANTS: One-half to three-fourths Indians; 350,000 mestizos; 150,000 whites; and small number of negroes.
15. INDUSTRIES AND MANUFACTURE:
    Agriculture: Cacao, coffee, sugar, grapes.
    Forestry: Rubber, hardwoods.
    Live Stock.
    Mining: Extensive resources, but not highly developed.
    Principal Manufacture: Panama hats.
16. IMPORTS AND EXPORTS: In 1918 the United States supplied 48 per cent. of the imports and took 66 per cent. of the exports.
17. EDUCATION: Primary education gratuitous and obligatory.
18. RELIGION: State recognizes no religion, but grants freedom to all worship.
19. LANGUAGE: Spanish.
20. HOTELS:
    Guayaquil: Paris, Guayaquil, Gran Victoria, Mediterranio, Capricho, Cosmopolita, Wellington.
    Quito: Estrangero, Froment, Internacional, Interandino, Giacometti, Nacional, Paris, Palace, Americano, Continental, Ecuador.
    Cuenca: Continental.
21. COMMERCIAL ESTABLISHMENTS:
22. HOSPITALS:
    Quito: Hospital Civil (new), Hospital Civil (old), Maternidad, Private Hospital, Drs. Ayora and Villavicencio.
    Guayaquil: General, Maternity, and Children's Hospitals.
23. MEDICAL SCHOOLS: University of Guayas, Guayaquil; University Central of Quito; University of Azuay, Cuenca.
24. PRINCIPAL POINTS OF INTEREST:
    Guayaquil: Pichincha Street, Statue of General Sucre, plazas which are unusually attractive with their luxuriant tropical foliage. Railroad passes through a very wonderful mountainous country from Guayaquil to Quito; beautiful views. Highest point en route, Urbina, 11,000 feet above sea level.
    Quito: Municipal building, national palace, Mount Pichincha (16,000 foot elevation) at foot of which lies Quito, Palace of Justice, Archbishop's Palace, Observatory, National Library, and many buildings of interesting architecture.

    Many famous cacao plantations; Jipijapa and Monte Christi, from where the majority of the Panama hats come; Cotopaxi, active volcano; Chimborazo, one of the most famous volcanoes in the world.
25. STREET AND MOTOR CARS: Street cars and taxicabs in principal streets.

26. COINS: Gold sucre, 100 centavos, equals $0.487 United States Condor, 10 sucres. Silver: Peseta, .20; real, .10; media real, .05; Nickel: 5, 2, 1, and ½ centavos.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: From Ecuador to United States: 10 centavos ¼ ounce; 6 centavos each additional unit or fraction.
From United States to Ecuador: 5 cents for first ounce, 3 cents for each additional ounce.
29. MAIL TIME: 12 days to Guayaquil, via Panama, from New York.
30. CABLE RATES: 50 cents a word from New York or New England states.
31. WIRELESS: Guayaquil.
32. DIFFERENCE IN TIME: Quito similar to New York.
33. HOLIDAYS: January 1, New Year's Day; November 14, National Holiday; May 24, Battle of Pichincha; August 10, Independence of Quito; September 18, Independence of Chile; October 9, Independence of Guayaquil; October 12, Discovery of America; November 2, All Souls' Day; December 25, Christmas.
34. FLAG: Three horizontal stripes. Upper one-half, yellow; center one-fourth, dark blue; lower one-fourth, dark red.
35. PUBLICATIONS: Principal: Quito, El Comercio; Guayaquil, El Telegrafo. No newspapers in English.
36. DIPLOMATIC SERVICE: Exchange Minister.
37. BANKS: *Guayaquil:* Anglo-South American Bank; Commercial Bank of Spanish America.

PARAGUAY

1. HISTORICAL REVIEW: Republic of Paraguay gained independence from Spanish rule in 1811, and after a short government by two consuls was seized by Dr. José Gaspar Rodriguez Francia, who ruled until 1840, when joint consuls of the Republic were elected. In 1870, after a war of five years with Brazil, Uruguay, and Argentina (see Argentina), a new constitution was formed.
2. AREA: 180,000 square miles. As large as the New England states, New York, Pennsylvania and Virginia. 5.5 inhabitants to the square mile. Of South American countries, larger only than Ecuador and Uruguay.
3. PHYSICAL CONTOUR: An inland Republic. Bounded by Bolivia, Brazil, and Argentina. Latitude 21° to 27° south; longitude 54°5′ to 60°30′ west. Low lying region, level and undulating plain.
4. PRINCIPAL BODIES OF WATER: Rivers: Paraguay and Parana.
5. RAILWAYS: Total mileage, 467.
6. METHOD OF TRAVEL: Principally by steamer on the rivers.
7. CLIMATE: Average summer temperature 82°; winter 64° F. One of the healthiest countries in the world.
8. FORM OF GOVERNMENT: Republic.
   President: Elected for term of four years, and non-active Vice-President who is President of the Senate.
   Senate: Twenty Senators, one to every 6,000 inhabitants; elected by the people.
   Chamber of Deputies: Forty, two to every 6,000 inhabitants.
   Cabinet: Five Ministers: Interior, Finance, Justice, Worship and Public Instruction, War and Marine, Foreign Affairs.
9. PRESIDENT: Dr. Manuel Gondra, to serve until Aug. 16, 1924.
10. PROVINCES AND TERRITORIES: Twenty electoral districts numbered from one to twenty.
11. PRINCIPAL CITIES:

Asuncion (Capital)	80,000
Villa Rica	29,000

12. PRINCIPAL PORTS: No sea port.
13. POPULATION: 1,000,000 inhabitants.
14. INHABITANTS: Guarani Indians predominate. Europeans, chiefly of Spanish blood, and negroes make up the balance.
15. INDUSTRIES AND MANUFACTURE:
   Agriculture: Yerba maté, sugar, tobacco, oranges.
   Cattle Raising.
   Mining: Iron, manganese, copper.
   Manufacture: Lace making.
16. IMPORTS AND EXPORTS: In 1918 United States supplied 19 per cent. of the imports, and took 4 per cent. of the exports.
17. EDUCATION: Preliminary education free and compulsory. National colleges at Asuncion, Concepcion, Villarica, Encarnacion, Barrera Grande, Misiones, Pilar.

18. RELIGION: Roman Catholic religion predominates; but other religions are permitted.
19. LANGUAGE: Spanish.
20. HOTELS: *Asuncion:* Cosmos, Hispaño, America, Italia, Roma, St. Pierre, Gran, Paraguay, Polermo.
Concepcion: Central, Frances, San Martin, Victoria, Aurora.
21. COMMERCIAL ESTABLISHMENTS:
22. HOSPITALS: *Asuncion:* Nacional, Sala de Maternidad, Asistencia Publica, Sanatoria de 1. Moreira, Sanatoria de T. Bello.
23. MEDICAL SCHOOLS: School of Medicine of Asuncion.
24. PRINCIPAL POINTS OF INTEREST: *Asuncion:* Government Capitol, Cathedral, Municipal Palace, Falls of Iguazu.
25. STREET AND MOTOR CARS: In Asuncion and Villa Rica.
26. COINS: Gold peso, equals $0.965 United States; paper peso. $0.06 United States.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: From Paraguay to United States: 175 centavos, ½ ounce; same for each additional unit or fraction thereof. From United States to Paraguay: 5 cents for first ounce, 3 cents for each additional ounce.
29. MAIL TIME: About thirty days from New York.
30. CABLE RATES: 50 cents a word from New York or New England.
31. WIRELESS: Asuncion, Encarnacion, and Concepcion.
32. DIFFERENCE IN TIME: 1 hour, 9 minutes east of New York.
33. HOLIDAYS: January 1, New Year's Day; February 3, San Blas Day; May 14, 15, Independence Days; August 15, Founding of Asuncion (local at Asuncion); October 12, Columbus Day; November 25, Adoption of Constitution; December 25, Christmas Day.
34. FLAG: Three horizontal stripes: Dark red, white, and dark blue; coat of arms on white portion.
35. PUBLICATIONS:
36. DIPLOMATIC SERVICE: Exchange Minister.
37. BANKS: *Asuncion:* London and River Plate Bank, Ltd.

PERU

1. HISTORICAL REVIEW: After the conquest of the Inca King by Pizarro in 1533, Lima became the center of the Spanish powers in South America, and it was not until 1821 that the independence of the country from Spain was declared and finally secured at the Battle of Ayacucho in 1824.
2. AREA: 722,461 square miles. Third largest of South American countries. Six inhabitants to the square mile. As large as all states east of the Mississippi River, excepting Illinois, Michigan and Wisconsin. Three times as large as Texas.
3. PHYSICAL CONTOUR: Country divided into three sections: Western lowlands, including Pacific ports; plateau lands, western and central Andes, running from 7,500 to 14,000 feet above sea level; eastern slope and lowlands, sparsely populated, covered with tropical forests and lacking in railroad facilities. Latitude 30′ to 18° south; longitude 69° to 81° west.
4. PRINCIPAL BODIES OF WATER: Maranon (Amazon) River, with tributaries (Neayali and Huallaga Rivers) navigable for 3,000 miles. Lakes: Titicaca, Junin, and Lauricocha (principal source of the Amazon).
5. RAILWAYS: 2,000 miles of railroad in Peru, operated chiefly by government.
6. METHOD OF TRAVEL: Railroad and river. Practically no overland communication between west coast of Peru and Iquitos, and eastern city.
7. CLIMATE: Although wholly within tropical latitude, climate is not tropical on west coast. Humboldt Current modifies the heat and gives Peru a cool temperature, although the same latitude in Brazil and eastern Peru is tropical. It practically never rains on the west coast of Peru. Temperature varies from 81°F. in summer to 60°F. in winter.
8. FORM OF GOVERNMENT: Similar to United States.
   President: Elected for five years, ineligible for term immediately succeeding his own. Elected by direct vote.
   Vice-Presidents: Two, elected for four years; take place of President only in case of death or incapacity. Elected by direct vote.
   Senate: Fifty-seven members, elected by direct vote for two years, one-half retiring each year, decided by lot.
   Chamber of Deputies: One hundred and twenty-eight members, one for every 30,000 inhabitants. Elected by direct vote for two years, one-half retiring each year, decided by lot.
   Cabinet: Six Ministers, holding office at pleasure of President: Interior, War and Marine, Foreign Affairs, Justice, Finance, and Fomento.
9. PRESIDENT: Señor Augusto B. Leguia. Assumed Presidency by means of a *coup d'etat* on July 4, 1919. Position afterwards confirmed and legalized by Congress. Term expires in 1924.

10 DEPARTMENTS AND TERRITORIES:

Departments:

Amazonas	Cuzco	Liberdad
Ancacho	Huancavelica	Lima
Apurimas	Huanuco	Loreto
Arequipa	Ica	Madre de Dios
Ayacucho	Junin	Piura
Cajamarca	Lambayeque	Puna

Tacna (now occupied by Chile)

Territories:

Callao	Moquegua	Tumbes

11. PRINCIPAL CITIES:

Lima (Capital)	160,000
Arequipa	50,000
Callao	40,000
Cuzco	30,000
Trujillo	20,000
Iquitos	20,000
Ayacucho	20,000

12. PRINCIPAL PORTS: Callao and Mollendo.

13. POPULATION: No census taken since 1876. Estimated present population, 4,500,000, one-half the population of New York state.

14. INHABITANTS: 900,000 white; 1,200,000 mestizos; 2,000,000 Indians; 400,000 miscellaneous. Large and unknown number of absolutely uncivilized Indians. About 80 per cent. of population estimated to be illiterate.

15. INDUSTRIES AND MANUFACTURE:

Mining, principal industry: Copper, coal, silver, gold, borax, guano (15,000 tons annually), petroleum (now being exploited by American capital).

Agriculture: Sugar, cacao, rice, cotton, rubber.

Manufacture: Cotton, wool, flour, cottonseed, cocaine, paper, sugar, chocolate, lard, cement, straw, Panama hats, breweries.

16. IMPORTS AND EXPORTS: In 1918 United States supplied 64 per cent. of imports and took 47 per cent. of exports.

17. EDUCATION: Elementary education is, by law, compulsory for both sexes, but the law is not enforced. Education free in public schools, maintained by government. High-schools maintained by government in capitals of the departments, the pupils paying a moderate fee. Elementary school course, 6 years; high-school, 6 years; medical school, 7 years.

18. RELIGION: Roman Catholic is religion of the state; but there exists absolute political and religious liberty.

19. LANGUAGE: Spanish.

20. HOTELS: *Lima:* Maury, Francia, Inglaterra.
Callao: Internacional.

21. COMMERCIAL ESTABLISHMENTS:

22. HOSPITALS: *Lima:* Italiano, Maison de Santé, Clinic Paraja y Llosa, Clinic Febrea, San Bartolme, Santa Ana, Dos de Mayo, French, Guadalupé, Military, Bellavista, Villarán Clinic.
23. MEDICAL SCHOOLS: National University at Lima.
24. PRINCIPAL POINTS OF INTEREST: Lima:
    Streets and Parks: Plaza des Armes, Calle Union (shopping street), Avenue 9th of September, Paseo Colon, Quinta Herren (on which is situated the American Legation), Botanical Gardens, Zoölogical Gardens.
    Buildings, etc.: Monastery of San Francisco, Senate Building, Cathedral (containing remains of Pizarro), National Museum, International Club, Colon Theater, Public Market, Bull Ring, San Cristobal Hill, Chorillos (bathing beach).
    Restaurants: Café Conciertos, Marron's Café.
    La Punta, summer resort; Inca and pre-Inca ruins; Lake Titicaca.
25. STREET AND MOTOR CARS: In Callao and Lima.
26. COINS: Gold standard. Libra equals $4.8665 United States. Divided into 10 soles. 1 sol equals $0.48 United States.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: To United States via Panama: 12 centavos, ½ ounce; 12 centavos each additional unit or fraction.
    To United States via San Francisco: 10 centavos, ½ ounce; 10 centavos each additional unit or fraction.
    From United States to Peru: 5 cents for first ounce; 3 cents for each additional ounce.
29. MAIL TIME: From New York: Callao, via Panama, 17 days; Mollendo, 24 days.
30. CABLE RATES: 50 cents a word from New York or New England.
31. WIRELESS: Iquitos, Lima, Callao, Pisco, Chala, Liticia, El Encanto, San Cristobal, Putumayo, Requena, Orellano, Masisca, Puerto Bermudez.
32. DIFFERENCE IN TIME: Lima practically same as New York.
33. HOLIDAYS: July 4, Independence Day; July 28, 29 and 30, Holidays commemorating National Independence; August 30, Santa Rosa de Lima; September 24, Our Lady of Ransom; October 12, Discovery of America.
34. FLAG: Three vertical stripes, dark red, white, and dark red.
35. PUBLICATIONS:
36. DIPLOMATIC SERVICE: Minister to Peru from United States; Ambassador to United States from Peru.
37. BANKS: *Lima:* Mercantile Bank of the Americas; National City Bank of New York.

URUGUAY

1. HISTORICAL REVIEW: Uruguay was formerly a part of the Spanish Vice-Royalty of Rio de la Plata, and subsequently a province of Brazil (see Brazil and Argentina). It declared its independence on August 25, 1825, recognized by the Treaty of Montevideo, signed on August 27, 1828. The present constitution of the Republic came into force on March 1, 1917.
2. AREA: 72,153 square miles. Smallest of all South American republics. As large as the combined states of New York, New Jersey, Connecticut, and Massachusetts. 14.9 inhabitants per square mile.
3. PHYSICAL CONTOUR: Small portion mountainous. Bounded by Brazil, Atlantic Ocean, and Argentina. Latitude 53° to 58° south; longitude 30° to 35° west. Noted for its extent of rolling plains.
4. PRINCIPAL BODIES OF WATER: Rivers: LaPlata and Uruguay. Lake Mirim.
5. RAILWAYS: 1,647 miles of railroad in operation. State does not own or operate any railroads.
6. METHOD OF TRAVEL: Railroad and river.
7. CLIMATE: Temperate climate. Seasons reverse of United States.
8. FORM OF GOVERNMENT: Similar to United States with slight variations.
   President: Elected for four years by direct vote of people.
   National Administrative Council: Nine members, six of the majority party and three of the minority. Three retire every two years. Election by direct popular vote.
   Senate: Nineteen Senators, chosen by electoral college, the members of which are elected directly by the people. One Senator for each department, chosen for six years, one-third retiring each two years.
   Representatives: Ninety, chosen for three years, one to every 12,000 inhabitants.
   Cabinet: Five members: Ministers of Foreign Affairs, and War and Marine elected by the President. Ministers of Finance, Public Works, Industry and Education elected by the Council.
9. PRESIDENT OF REPUBLIC AND PRESIDENT OF ADMINISTRATIVE COUNCIL:
   Dr. Baltasar Brum, President of the Republic. Term expires February 28, 1923.
   Dr. Feliciano Viera, President of the Administrative Council.
10. DEPARTMENTS:

Artigas	Maldonda	Rocha
Cauelones	Minas	Salto
Cerro Largo	Montevideo	San José
Colonia	Paysandú	Soziano
Durazuo	Rio Negro	Tacuarembo
Flores	Rivera	Treinte y Tres
Florida		

11. PRINCIPAL CITIES:

Montevideo (Capital)	364,000
Paysandú	22,000
Salto	20,000
Mercedes	18,000
San José	13,000
Melo	13,000
Rocha	12,000

12. PRINCIPAL PORT: Montevideo.
13. POPULATION: 1,042,686. 530,508 males; 512,178 females.
14. INHABITANTS: Italians predominate; Spanish, Brazilians, Argentines, French, British, Swiss, German, and others.
15. INDUSTRIES AND MANUFACTURE: Agriculture: Wheat, corn, alfalfa, tobacco, grapes. Live stock and meats, principal industry. Uruguay imports nearly all of her manufactured goods.
16. IMPORTS AND EXPORTS: In 1918 United States supplied 25 per cent. of imports and took 26 per cent. of exports.
17. EDUCATION: Preliminary education obligatory. Primary school course, 5 years; secondary, 6 years; medical school, 7 years.
18. RELIGION: State and church separate and there is complete religious liberty. Roman Catholic religion predominates.
19. LANGUAGE: Spanish.
20. HOTELS:
    Montevideo: Gran, Colon, Alhambra.
    Suburbs of Montevideo: Parque, Urbano, Pocitos, and Carrasco.
21. COMMERCIAL ESTABLISHMENTS: Many shops of interest to visitors.
22. HOSPITALS: *Montevideo:* Maciel, Military, Italian, Spanish, Children's, Maternity, British, Fermin Ferreira, and Pereira Rossell.
23. MEDICAL SCHOOLS: University of Medicine, Montevideo.
24. PRINCIPAL POINTS OF INTEREST: Montevideo:
    Parks and Streets: Urbano Park, Avenida 18 de Julio, Calle Sarandi, Plaza Independencia, Plaza Cagancha, Plaza Constitucion, Plaza Libertad, Plaza Zabala, Plaza Treinte y Tres, Plaza de Armes, Plaza Joaquim Suarez, The Prado, Rambla Wilson.
    Bathing Beaches: Pocitos, Playa Ramirez, Capurro, Maloin, Carrasco, Floresta, Solis, Atlantida.
    Buildings: Solis Theater, Government Palace, Exposition Building, President's Palace, Cathedral, University of Montevideo, Military Hospital, Penitentiary, Old Fort (El Cerro).
25. STREET AND MOTOR CARS: To all parts of Montevideo and the suburbs.
26. COINS: Gold standard. Peso Nacional equals $1.03 United States. Silver peso or dollar divided into one-half and one-fifth. $5, $2, and $1, chief currency.
27. WEIGHTS AND MEASURES: Metric system.

28. POSTAGE: 8 centesimos ¾ ounce, 8 centesimos each additional unit or fraction thereof. From United States to Uruguay: 5 cents for first ounce, 3 cents for each additional ounce.
29. MAIL TIME: To Montevideo direct, 25 days from New York.
30. CABLE RATES: 50 cents a word from New York or New England states.
31. WIRELESS: Banco Ingles, Cerrito, and Isla de Lobos.
32. DIFFERENCE IN TIME: Montevideo 1 hour 15 minutes east of New York.
33. HOLIDAYS: January 1, New Year's Day; February 3, Battle of Monte Caseros; February 28, Proclamation of Independence; May 18, Battle of Las Piedras; May 25, Independence of the Plate River Province; July 4, American Independence Day; July 14, Fall of the Bastile; July 18, Constitution Day; August 25, Independence of Uruguay; September 20, Italian Liberty Day; October 12, Discovery of America; December 25, Christmas Day. April 18, 19, and 20 (every four years coincident with leap year) in memory of Uruguayan patriots.
34. FLAG: Five white and four dark blue alternating horizontal stripes. Small white ground in upper left-hand corner containing the sun with rays.
35. PUBLICATIONS: Several in English. Many daily, weekly and monthly in Spanish.
36. DIPLOMATIC SERVICE: Exchange Minister.
37. BANKS: *Montevideo:* National City Bank of New York; Royal Bank of Canada.

VENEZUELA

1. HISTORICAL REVIEW: Venezuela is in the portion of South America first discovered by Columbus in 1498. It was originally a Spanish colony, revolted in 1810, and declared its independence under the leadership of Simon Bolivar, the Liberator. In 1845 Spain recognized the independence of the state. It was originally a part of the Greater Republic of Colombia; but in 1829 declared its independence of these states. The present constitution was formed in 1914.
2. AREA: 373,976 square miles. 7 inhabitants to the square mile. One of the most sparsely settled of all South American countries. As large as New England and the Atlantic Coast states combined. One and one-half times as large as Texas. Sixth largest South American country.
3. PHYSICAL CONTOUR: Northernmost part of South American continent. Bounded on north by Caribbean Sea, on east by British Guiana and Brazil, on south by Brazil, on west by Colombia. Divided into regions, extensive plains and river valleys, by three mountain ranges. Latitude 2° 5′ to 12° north; longitude 60° to 73° 5′ west.
4. PRINCIPAL BODIES OF WATER: Rivers: Orinoco, Aroa, Tocuya, and Zulia. Lakes: Maracaibo and Valencia.
5. RAILWAYS: Total mileage, 530.
6. METHOD OF TRAVEL: Carriage roads from Caracas to Macuto; to Valencia, and to Guatire. In remote districts traffic is carried on on mule back or in carts. In the river districts, in boats.
7. CLIMATE: Tropical, except where modified by altitude. Tropical heat at coast modified by trade winds which lower temperature at night. Generally healthy, although entirely within the tropics. Mean temperature at Caracas only 62° F.
8. FORM OF GOVERNMENT: Similar to United States.
   President: Elected by Congress for seven years, with no restriction as to re-election.
   Senate: Forty members elected for three years, two for each state.
   Chamber of Deputies: Each state chooses one deputy for every 35,000 inhabitants.
   Ministers: Foreign Affairs, Finance, War, Interior, Education, Promotion, and Public Works.
9. PRESIDENT: General Juan Vincente Gómez, to serve until May 3, 1922.
10. STATES AND TERRITORIES: 20 states, 2 territories.
    States:

Anzoátegui	Gúarico	Sucre
Apure	Lara	Táchira
Aragua	Merida	Trayillo
Bolivar	Miranda	Yaracuy
Carabobo	Monages	Tamora
Cojedes	Nueva Esparta	Tulia
Falçon	Portuguesa	

Territories:

Amazones — Delta Amacuro

11. PRINCIPAL CITIES:

Caracas (Capital)	72,429
Valencia	54,387
Maracaibo	34,740
Barquisimento	27,069
San Cristobal	16,797
Merida	13,366

12. PRINCIPAL PORTS: Maracaibo, Puerto Cabello, La Guaira.
13. POPULATION: 2,323,527. One-half population of Texas.
14. INHABITANTS: Few pure whites, but large percentage of population mestizos. Also a considerable amount of negro blood.
15. INDUSTRIES AND MANUFACTURE:
    Agriculture: Coffee, cacao, sugar, tobacco, cotton, and corn.
    Minerals: Petroleum, asphalt, gold, coal, and iron.
    Forest Products: Rubber, hardwood, vanilla, Tonka bean.
    Live Stock.
16. IMPORTS AND EXPORTS: In 1918 United States supplied 61 per cent. of imports, and took 41 per cent. of exports.
17. EDUCATION: Elementary education free in public and private schools.
18. RELIGION: Roman Catholic predominates, but others are tolerated.
19. LANGUAGE: Spanish.
20. HOTELS:
    Caracas: Gran Hotel Klindt, Gran Hotel, Gran Hotel Continental, Alemania, America.
    Maracaibo: Los Andes, Zulia, Americano Lago, Bismarck, Colon.
    Valencia: Lourdes, Ottolina, Olivares.
21. COMMERCIAL ESTABLISHMENTS:
22. HOSPITALS: *Caracas:* Vargas, Militar. *Valencia:* Civil. *Maracaibo:* Chiquinquiria.
23. MEDICAL SCHOOLS: School of Medicine, Caracas. School of Medicine, Merida.
24. PRINCIPAL POINTS OF INTEREST:
    Caracas: Municipal Theater, Washington Monument in Washington Plaza, Calvario Hill, Bolivar Statue in Bolivar Plaza, Treasury Building, National University, Congreso, President's Palace, National Opera House, Cathedral, Pantheon, Bolivar Museum, Academy of Fine Arts, Public Market.
    Paraiso: A suburb of Caracas.
25. STREET AND MOTOR CARS: Electric street railways in operation in capital.
26. COINS: Bolivar (100 centavos) equals $0.193 United States.
    Gold: 100, 25, 10 Bolivars. Silver: 5, 2½, 2, 1 Bolivars. 50 and 20 centavos.
27. WEIGHTS AND MEASURES: Metric system.

28. POSTAGE: To United States: 50 centiemes for ¾ ounce, 25 centiemes each additional unit or fraction thereof.
From United States: 5 cents first ounce, 3 cents each additional ounce.
29. MAIL TIME: Direct, 7 days from New York.
30. CABLE RATES: $1.00 per word from New York or New England.
31. WIRELESS: La Guaira, Puerto Cabello, Maracay, and Maracaibo.
32. DIFFERENCE IN TIME: 32 minutes east of New York.
33. HOLIDAYS: January 1, New Year's Day; April 19, First Movement for Independence; June 24, Battle of Carabobo; July 5, Independence Day; October 28, Bolivar Day; December 19, National Holiday; December 25, Christmas.
34. FLAG: Three horizontal stripes, yellow, dark blue, and red. Seven small white stars form a circle in center of blue stripe.
35. PUBLICATIONS:
36. DIPLOMATIC SERVICE: Exchange Minister.
37. BANKS: *Caracas:* Mercantile Bank of the Americas; National City Bank of New York; Royal Bank of Canada.
Maracaibo: Mercantile Bank of the Americas; Royal Bank of Canada.

VOCABULARY

ENGLISH — SPANISH
ENGLISH — PORTUGUESE

VOCABULARY

Cardinal Numbers

	SPANISH	PORTUGUESE
0	cero *sāy-roh*	zero *zeh-roh*
1	uno, un, una *ōo'-noh, oon, ōo'-nah*	um *oong*
2	dos *dohs*	dois *do'ish*
3	tres *trayss*	tres *traish*
4	cuatro *kwāh-troh*	quatro *kwah-troo*
5	cinco *sīn-koh*	cinco *singk-oo*
6	seis *sāy-is*	seis *say-ish*
7	siete *see-āy-tay*	sete *sett*
8	ocho *oh-choh*	oito *oy-it-oo*
9	nueve *noo'āy-vay*	nove *nov*
10	diez *dee-āis*	dez *daysh*
11	once *ōhn-say*	onze *ongz*
12	doce *dōh-say*	doze *doz*
13	trece *trāy-say*	treze *trayz*
14	catorce *kah-tōr-say*	quatorze *kwer-torz*
15	quince *kēen-say*	quinze *kingz*
16	diez y seis *dee-āis ee sāy-iss*	dez a seis *de-ze-say-ish*

	SPANISH	PORTUGUESE
17	diez y siete *dee-āis ee see-āy-tay*	des a sete *de-ze-sette*
18	diez y ocho *dee-āis ee ōh-choh*	dezaoito *de-zoy-it-oo*
19	diez y nueve *dee-āis ee noo-āy-vay*	dez a nove *de-ze-nov*
20	veinte *vāy'in-tay*	vinte *vingt*
21	veinte y uno *vāy'in-tay ee ōo'noh*	vinte e um *vingt-ee-oong*
22	veinte y dos *vāy'in-tay ee dohs*	vinte e dois *vingt-ee-do-ish*
30	treinta *trāy'in-tah*	trinta *treen-tah*
31	treinta y uno *trāy'in-tah ee ōo'noh*	trinta e um *treen-tah-ee-oong*
40	cuarenta *kwah-rēhn-tah*	quarenta *coo-ahr-ain-tah*
50	cincuenta *sin-kwēhn-tah*	cincuenta *seen-coo-ain-tah*
60	sesenta *say-sēhn-tah*	sessenta *sais-sain-tah*
70	setenta *say-tēn-tah*	setenta *sait-ain-tah*
80	ochenta *oh-chēn-tah*	ortenta *oy-tain-tah*
90	noventa *noh-vēhn-tah*	noventa *no-vain-tah*
100	ciento, cien *see-ēhn-toh see'ēn*	cem *sahm*
101	ciento, uno *see-ēhn-toh, ōo'noh*	cento e um *sen-toh-ee-oong*
200	doscientos,-as *dohs-see-ēhn-tohs tahs*	duzentos *doo-zen-tos*
300	trescientos,-as *trays-see-ēhn-tohs tahs*	trezentos *tray-zen-tos*
400	cuatrocientos,-as *kwah-troh-see-ēhn-tohs tahs*	quatrocentos *kwa-tro-sen-tos*
500	quinientos,-as *kee-nee-ēhn-tohs tahs*	quinhentos *kee-nee-ain-tos*
600	seiscientos,-as *sāy-is-see-ēhn-tohs tahs*	seiscentos *say-ish-sen-tos*
700	setecientos,-as *sāy-tay-see-ēhn-tohs tahs*	setecentos *set-sen-tos*

	SPANISH	PORTUGUESE
800	ochocientos,-as *oh-choh-see-ēhn-tohs tahs*	oitocentos *oy-too-sen-tos*
900	novecientos,-as *noh-vay-see-ēhn-tohs tahs*	novecentos *nov-sen-tos*
1,000	mil *meel*	mil *meel*
2,000	dos mil *dohs meel*	dois mil *do-ish meel*
1,000,000	millón *mil-yōhn*	milhão *mee-lee-ah-ohn*

Days of the Week

Sunday	Domingo *doh-mīn-goh*	Domingo *doo-meen-goh*
Monday	Lunes *lōo-ness*	Segunda-Feira *se-goon-dah fay-rah*
Tuesday	Martes *māhr-tess*	Terça-Feira *ter-sah fay-rah*
Wednesday	Miércoles *mee-āir-koh-lays*	Quarta-Feira *kwar-tah fay-rah*
Thursday	Jueves *hoo'āy-vess*	Quinta-Feira *keen-tah fay-rah*
Friday	Viernes *vee-āir-ness*	Sexta-Feira *sehs-tah fay-rah*
Saturday	Sábado *sāh-bah-doh*	Sabado *sah-bah-doh*

The Months

January	Enero *ay-nāy-roh*	Janeiro *jeh-nay-roh*
February	Febrero *fay-brāy-roh*	Fevereiro *fay-vay-ray-roh*
March	Marzo *māhr-soh*	Março *mahr-soh*
April	Abril *ah-brēēl*	Abril *ah-breel*
May	Mayo *māh-yoh*	Maio *my-oh*
June	Junio *hōo-nee-oh*	Junho *joo-nyoh*
July	Julio *hōo-lee-oh*	Julho *joo-lyoh*
August	Agosto *ah-gōhs-toh*	Agosto *ah-gohs-toh*

	SPANISH	PORTUGUESE
September	Septiembre *sep-tee'ĕm-bray*	Setembro *set-tem-broh*
October	Octubre *ock-tŏo-bray*	Outubro *oh-too-broh*
November	Noviembre *noh-vee'ĕm-bray*	Novembro *noh-vem-broh*
December	Diciembre *dee-see'ĕm-bray*	Dezembro *day-zem-broh*

The Seasons

Spring	Primavera *pree-mah-vāy-rah*	Primavera *pree-mah-vay-rah*
Summer	Verano *vay-rāh-noh*	Verão *ver-ah-ohn*
Autumn	Otoño *oh-tōh-n'yoh*	Outomno *oh-toh-noh*
Winter	Invierno *in-vee-āir-noh*	Inverno *een-vehr-noh*

Wearing Apparel — General

Ladies or Gentlemen

Boots	botas *boh-tahs*	botas *boh-tahs*
Collar (s)	cuello (s) *kwāy-l'yoh*	collarinho (s) *koh-lah-reen-yoh*
Gloves, pair (s)	guantes, par (es) *goo-ăhn-tays, pahr*	luvas, par (es) *loo-vahs, pahr*
Handkerchiefs	pañuelos *pah-noo'āy-lohs*	lenços *lehn-sohs*
Hat	sombrero *som-bray-roh*	chapéu *shah-pay-oh*
Nightshirt (s) Nightdress (es)	camisa (s) de dormir *kah-mēe-sah day dor-mēer*	camisa (s) de dormir *kah-mee-sah day dohr-meer*
Overcoat	abrigo *ah-bree-goh*	sobretudo *soh-bray-too-doh*
Shoes	zapatos *sah-pah-tohs*	botinas *boh-teen-nahs*
Slippers	zapatillas *sah-pah-teel-l'yahs*	chinelos *shee-nay-lohs*
Tie	corbata *kor-bah-tah*	gravata *grah-vah-tah*
Umbrella	paraguas *pah-rah-gwahs*	guarda-chuva *guahr-dah shoo-vah*

	SPANISH	PORTUGUESE
Gentlemen		
Coat (s)	chaqueta (s) *chah-kāy-tah*	paletó *pah-lay-toh*
Drawers	calzoncillos *kahl-son-sēe-l'yohs*	ceroulas *sayr-roh-lahs*
Pajamas	traje de dormir *trāh-hay day dor-mēer*	pajamas *pah-jah-mahs*
Shirt (s)	camisa (s) *kah-mēe-sah*	camisa (s) *kah-mee-sah*
Socks (pairs)	calcetines par(es) *kahl-say-tēe-nays pahr*	meias par (es) *my-ahs pahr*
Spats	polainas *poh-ly-nahs*	polainas *poh-lye-nahs*
Suspenders	tirantes *tee-rahn-tays*	suspensorios *soos-pain-soh-ree-ohs*
Trousers	pantalones *pahn-tah-lōh-nays*	calças *kahl-sahs*
Waistcoat (s)	chaleco (s) *chah-lāy-koh*	collete (*s*) *kohl-lay-tay*
Ladies and Children		
Apron (s) Pinafore (s)	delantal (es) *day-lahn-tāhl*	avental *ah-vain-tahl*
Bib (s)	babero (s) *bah-bāy-roh*	babadouro *bah-bah-doh-roh*
Blouse Shirt Waist	blusa (s) *blōo-sah*	blusa *bloo-sah*
Camisole (s)	camisola (s) *kah-mee-sōh-lah*	camisola *kah-mee-soh-lah*
Cap (s)	gorra (s) *gŏhr-rah*	boné *boh-nay*
Chemise (s)	camisa (s) *kah-mēe-sah*	camisa *kah-mee-sah*
Combinations	combinaciones *kom-bee-nah-see-ōh-nays*	combinação *kohm-bee-nah-sah-oh*
Corset-cover (s)	corpiño (s) *kor-pēe-n'yoh*	esper tilho *ehs-pehr teel-yoh*
Drawers	calzones *kahl-sōh-nays*	ceroulas *sayr-roh-lahs*
Dress (es)	traje (s) *trāh-hay*	vestido *ves-tee-doh*
Scarf (ves)	tapaboca (s) *tah-pah-bōh-kah*	faxa *fah-shah*
Shawl (s)	pañoleta (s) *pah-n'yoh-lāy-tah*	chale *shah-leh*

	SPANISH	PORTUGUESE
Skirt (s)	saya (s) *sāh-yah*	saia *sah-ee-ah*
Stockings, pair(s)	medias, par (es) *māy-dee-ahs pahr*	meias *may-ahs*

Miscellaneous Words

After	después *dess-poo-ess*	depois *day-poh-ays*
Also	tambien *tahm-bee-ehn*	tamben *tahm-by-ay*
Always	siempre *see-em-pray*	sempre *sehm-pray*
Another	otro *oh-troh*	outro *oh-troh*
Bad	malo *mah-loh*	máo *mah-oh*
Bank	banco *bahn-koh*	banco *bahn-koh*
Before	antes *ahn-tays*	antes *ahn-tays*
Black	negro *nay-groh*	negro *nay-groh*
Blanket	frazada *frah-sah-dah*	coberta *koh-bair-tah*
Boat	bote *boh-tay*	bote *boh-tay*
Brush	cipillo *say-peel-yoh*	escova *esh-koh-vah*
Cab	coche *koh-chay*	carruagem *kah-roo-ah-jaim*
Cab-driver	cochero *koh-chay-roh*	cocheiro *koh-shay-roh*
Camera	camára *kah-mah-rah*	camara *kah-mah-rah*
Camp	campo *kahm-poh*	campo *kahm-poh*
Cheap	barato *bah-rah-toh*	barato *bah-rah-toh*
Church	iglesia *ee-glay-see-ah*	igreja *ee-gray-jah*
Cigar	cigarro *see-gahr-roh*	cheruto *sher-roo-toh*
Cigarette	cigarillo *see-gahr-reel-yoh*	cigarro *see-gar-roh*

	SPANISH	PORTUGUESE
Closed	cerrado *ser-rah-doh*	fechado *fay-shah-doh*
Cold	frio *free-oh*	frio *free-oh*
Counterpane	cubre cama *koo-bray kah-mah*	coberta *koh-bair-tah*
Curtains	cortinas *kohr-tee-nahs*	cortinas *kohr-tee-nahs*
Cushion	cojin *koh-heen*	almofada *ahl-moh-fah-dah*
Dear	querida *kay-ree-dah*	querida *ker-ree-dah*
Dirty	sucio *soo-see-oh*	sujo *soo-joh*
Dust	polvo *pohl-voh*	pó *paw*
Enough	bastante *bahs-tahn-tay*	bastante *bahs-tahn-tay*
Envelopes	sobres *soh-brays*	envelopes *ehn-vail-loh-pays*
Evening	anochecer *ah-noh-chay-sair*	á noite *ah noh-ee-tay*
Everywhere	en todas partes *ehn toh-dahs pahr-tays*	em toda a parte *ehm toh-dah ah pahr-tay*
Farm	granja *grahn-hah*	quintal *keen-tahl*
Films	películas *pay-lee-koo-lahs*	fitas *fee-tahs*
Fish	pescado *pess-kah-doh*	peixe *pay-ee-shay*
Flowers	flores *floh-rays*	flors *floh-rays*
Forest	bosque *bōss-kay*	bosque *bohs-kay*
Foxes	zorros *sōh-rohs*	raposas *rah-poh-sahs*
Frost	escarcha *ess-kāhr-chah*	geada *jay-ah-dah*
Frozen	helado *ay-lāh-doh*	gelado *jel-lah-doh*
Fur	piel *pee-ēll*	pelles *pay-lays*
Goats	cabras *kāh-brahs*	cabras *kah-brahs*

	SPANISH	PORTUGUESE
Good	bueno *boo'āy-noh*	bom *bohm*
Hill	colina *koh-lēe-nah*	colina *koh-lee-nah*
Horse	caballo *kah-bāhl'-yoh*	cavallo *kah-vah-loh*
Hot	caliente *kah-lee-ēhn-tay*	quente *ken-tay*
House	casa *kāh-sah*	casa *kah-sah*
Ice	hielo *ee'āy-loh*	gelo *jay-loh*
Ink	tinta *tīn-tah*	tinta *teen-tah*
Kiss	beso *bāy-soh*	beijo *bay-joh*
Knife (pen)	corta- pluma *kōhr-tah plōo-mah*	canivete *kah-nee-veh-tay*
Lake	lago *lāh-goh*	lago *lah-goh*
Lavatory	lavatorio *lah-vah-tōh-ree-oh*	lavatorio *lah-vah-tor-ree-oh*
Light (electric)	luz eléctrica *loo's ay-lēck-tree-kah*	luz electrica *looz ee-lek-tree-kah*
Long	largo *lāhr-goh*	comprido *kohm-pree-doh*
Matches	fosforos *fohs-foh-rohs*	phosphoros *fohs-fohr-rohs*
Mirror	espejo *ess-pāy-hoh*	espelho *ehs-pail-yoh*
Moon	luna *lōo'nah*	lua *loo-ah*
Moonlight	luz de la luna *loo's day lah lōo'nah*	luar *loo-ahr*
More	más *mahs*	mais *may-is*
Mountain	montaña *mon-tāh-n'yah*	montanha *mohn-tahn-yah*
Museum	museo *moo-sāy-oh*	museo *moo-say-oh*
Needle	aguja *ah-gōo-hah*	agulha *ah-gool-yah*
Never	nunca *nōon-kah*	nunca *noon-kah*

	SPANISH	PORTUGUESE
Night	noche *nōh-chay*	noite *noh-ee-tay*
No	no *noh*	não *nahoon*
Nothing	nada *nāh-dah*	nada *nah-dah*
Now	ahora *ah-ōh-rah*	agora *ah-go-rah*
Nurse	enfermera *ehn-fer-māy-rah*	enfermeira *en-fair-may-rah*
Open	abierto *ah-bee-āir-toh*	aberto *ah-behr-toh*
Paper (letter)	papel de escribir *pah-pēll day ess-kree-bēer*	papel para cartas *pah-pehl pah-rah kahr-tahs*
Pen	pluma *plōo-mah*	caneta *kah-nay-tah*
Pencil	lápiz *lāh-pees*	lapix *lah-peez*
Photograph	fotografía *foh-toh-graf-fēe-ah*	photographia *foh-toh-grah-fee-ah*
Picture	cuadro *kwāh-droh*	quadro *kwah-droh*
Pillow-case	funda *fōon-dah*	fronha *frohn-yah*
Pin	alfiler *ahl-fee-lāir*	alfinete *ahl-fee-nay-tay*
Pipe	pipa (para fumar) *pēe-pah (pāh-rah foo-māhr)*	cachimbo *kah-sheem-boh*
Police	policia *poh-lee-see-ah*	policia *poh-lee-see-ah*
Police Station	estacion de policia *ess-tah-see-ohn day poh-lee-see-ah*	estacão da policia *ehs-tah-sah-ohn dah poh-lee-see-ah*
Postcards	tarjetas postales *tahr-hay-tahs pohs-tah-lays*	bilhetes postaes *beel-yay-tehs pohs-tah-yehs*

	SPANISH	PORTUGUESE
Post-office	oficina *oh-fee-see-nah* de correo *day koh-ray-oh*	correio *kohr-ray-yoh*
Quick	rápido *rah-pee-doh*	rapido *rah-pee-doh*
Railway Station	estacion de *ess-tah-see-ohn day* ferro-carriles *fay-roh-kah-reel-lays*	estacão da *ehs-tah-sah-ohn dah* estrada de ferro *ehs-trah-dah day fay-roh*
Rain	lluvia *l'yoo-vee'ah*	chuva *shoo-vah*
River	rio *ree'-oh*	rio *ree-oh*
Rope	cuerda *kwer-dah*	corda *kohr-dah*
Sheets	sábanas *sah-bah-nahs*	lençoes *lehn-soh-is*
Short	corto *kor-toh*	curto *koor-toh*
Silk	seda *say-dah*	seda *say-dah*
Snow	nieve *nee'ay-vay*	neve *nay-vay*
Soap	jabón *hah-bun*	sabão *sah-bah-ohn*
Soon	pronto *pron-toh*	cedo *say-doh*
Stamps	sellos *say-l'yohs*	sêllo *say-loh*
Steamer	vapor *vah-pohr*	vapor *vah-pohr*
Strap	correa *koh-ray-ah*	correa *kohr-ray-ah*
String	cuerda *koo-air-dah*	cordel *kohr-dell*
Table-cloth	mantel *mahn-tell*	toalha da mesa *toh-ahl-yah dah may-sah*
That	ese *ess-say*	esse *es-say*
There	allá *ah-l'yah*	acolá *ah-koh-lah*
These—Those	estos —aquellos *ess-tohs ah-kell-l'yohs*	estos—aquellos *es-tohs ah-kay-lohs*

	SPANISH	PORTUGUESE
Thimble	dedal *day-dahl*	dedal *day-dahl*
This	esto *ess-toh*	isto *ees-toh*
Thread	hilo *ee-loh*	linha *leen-yah*
Tobacco	tabaco *tah-bah-koh*	fumo *foo-moh*
Today	hoy *oh'-ee*	hoje *oh-jay*
Tomorrow	mañana *mah-n'yah-nah*	amanhã *ah-mahn-yah*
Too much	demasiado *day-mah-see-ah-doh*	demasiado *day-mah-see-ah-doh*
Tonight	esta noche *ess-tah noh-chay*	esta noite *es-tah noh-ee-tay*
Towel	toalla *toh-āhl-l'yah*	toalha *toh-ahl-yah*
Tower	torre *tōh-ray*	torre *tor-ray*
Train	tren *trehn*	trem *tryim*
Tram	tranvía *trahn-vēe-ah*	bonde *bohn-day*
Tree	arbol *āhr-bol*	arvore *ahr-voh-ray*
Umbrella	paraguas *pah-rāh-gwahs*	guarda-chuva *guar-dah shoo-vah*
Under	debajo *day-bāh-hoh*	debaixo *day-bah-ee-shoh*
Very	muy *mōo'ee*	muito *moo-ee-toh*
Waiter	mozo *mōh-soh*	garçon *gahr-sohn*
Water	agua *āh-gwah*	agua *ah-gwah*
Waterfall	cascada *kahs-kāh-dah*	queda de agua *kay-dah day ah-gwah*
Weather—good	buen tiempo *bōo'en tee-ēhm-poh*	bom tempo *bohn tayn-poh*
Weather—bad	mal tiempo *mahl tee-ēhm-poh*	máo tempo *mahoh tayn-poh*
When	cuando *kwahn-doh*	quando *kwan-doh*

	SPANISH	PORTUGUESE
Where	donde *dōn-day*	onde *ohn-day*
White	blanco *blāhn-koh*	branco *brahn-koh*
Why	porque *por-kāy*	porque *pohr-kay*
With	con *kon*	com *kohn*
Without	sin *sin*	sem *sayn*
Yacht	yate *yāh-tay*	hiate *ee-ah-tay*
Yes	sí *see*	sim *seen*
Yesterday	ayer *ah-yāir*	hontem *ohn-tayn*

For Use in a Restaurant

(English—Spanish)

I want a table for —— persons.
Deseo una mesa para —— personas.
day-say-oh oo-nah may-sah pah-rah —— pehr-sohn-nahs

Give me the bill of fare.
Déme el menú.
day-may ell men'oo

What have you ready?
¿Qué es lo que hay ya listo?
kay ess loh kay ah'ee yah lees-toh

We are in a hurry.
Tenemos prisa.
tay-nay-mohs pree-sah

No more, thank you.
Gracias, no deseo mas.
grah-see-ahs, noh day-say-oh mahs

Bring me the bill.
Traigame la cuenta.
try-gah-may lah kwen-tah

This is not correct.
Esto no esta bien.
ess-toh noh ess-tah bee-ehn

For Use in a Restaurant

(English—Portuguese)

I want a table for —— persons.
Desejo uma meza para —— pessoas.
day-say-joh oo-mah may-sah pah-rah —— pay-soh-ers

Give me the bill of fare.
Traga-me o menu.
trah-gah may oo may-noo

What have you ready?
¿O que tem prompto?
oo kay time prohn-toh

We are in a hurry.
Estamos com muita pressa.
ehs-tah-mohs kohn moo-ee-tah pray-sah

No more, thank you.
Não desejo nada mais, muito obrigado.
nahoh day-say-joh nah-dah myees, moo-ee-toh oh-bree-gah-doh

Bring me the bill.
Traga-me a conta.
trah-gah-may ah kohn-tah

This is not correct.
¡Isto não é correcto!
ees-too nah-oh ay kor-ray-toh

	SPANISH	PORTUGUESE
Fish	pescado *pay-skah-doh*	peixe *pay-shah*
Anchovies	anchovas *ahn-choh-vahs*	anchovas *ahn-show-vahs*
Cod	bacalao *bah-kah-lah-oh*	bacalhau *bah-kall-ee-aho*
Crab	cangrejo *kahn-gray-hoh*	caranguejo *kah-rahn-gay-joh*
Haddock	róbalo *roh-bah-loh*	robalo *roh-bah-loh*
Herring	arenque *ah-rehn-kay*	arenque *ahr-ain-kay*
Lobster	langosta *lahn-goss-tah*	lagosta *lah-gos-tah*
Mackerel	macarela *mah-kah-ray-lah*	cavalla *kah-val-lah*
Oysters	ostras *oss-trahs*	ostras *os-traas*
Salmon	salmón *sahl-mohn*	salmão *saal-maa-ohn*
Solè	lenguado *lehn-gwah-doh*	linguado *leen-goo-ah-doh*
Trout	trucha *troo-chah*	truta *troo-tah*
Turtle	tortola *torr-toh-lah*	tartaruga *tahr-tahr-oo-gah*
Fowl	aves *ah-vehs*	aves *ah-vehs*
Chicken	pollo *pohl-yoh*	gallinha *gahl-een-ee-ah*
Duck	pato *pah-toh*	pato *pah-toh*
Game	caza *kah-sah*	caça *kahs-sah*
Goose	ganso *gahn-soh*	ganso *gahn-soh*
Partridge	perdíz *pair-dees*	perdis *pair-dees*
Pheasant	faisán *fye-sahn*	faisão *faa-eeis-ah-on*
Pigeon	paloma *pah-loh-mah*	pombo *pohm-boh*

	SPANISH	PORTUGUESE
Quail	codorníz *koh-dor-nees*	codorniz *co-dor-nees*
Turkey	pavo *pah-voh*	peru *peer-oo*
Meats	carnes *kahr-nays*	carnes *kahr-ness*
Beef-steak	biftek *beef-teck*	um bife *oom bee-feh*
Corned-beef	cecina *say-see-nah*	carne de conser-va *kahr-nay day kon-sayr-vah*
Roast-beef	carne asada *kahr-nay ah-sah-dah*	carne assada *kahr-nay ah-sah-dah*
Chop	chuleta *choo-lay-tah*	costella *coos-tail-lah*
Cutlet	costeleta *koss-tay-lay-tah*	costelleta *coos-tail-lait-tah*
Ham	jamón *hah-mon*	presunto *pray-soon-toh*
Kidney	riñones *ree-n'yoh-nays*	rins *reehns*
Lamb	cordero *korr-day-roh*	cordeiro *koor-day-roh*
Liver	hígado *ee-gah-doh*	figado *fee-gah-doh*
Mutton	carnero *kahr-nay-roh*	carneiro *cahr-nay-roh*
Sausage	salchicha *sahl-chee-chah*	salchichão *sahl-chee-shah-ohn*
Tongue	lengua *len-gwah*	lingua *leehn-goo-ah*
Veal	ternera *terr-nay-rah*	vitella *veeh-tail-lah*
Vegetables	verduras *vair-doo-rahs*	legumes *laig-oom-mehs*
Artichokes	alcachofas *ahl-kah-choh-fahss*	alcachofras *ahl-caah-sho-frahs*
Asparagus	esparragos *ess-pah-rah-gohs*	espargos *es-pahr-goos*
Beans	porotos *poh-roh-tohs*	feijões *fai-jaah-ons*
Cabbage	repollo *ray-poh-l'yoh*	repolho *ray-poll-yoh*

	SPANISH	PORTUGUESE
Carrots	zanahorias *sah-nah-oh-ree'ahs*	cenoura *say-noh-rahs*
Cauliflower	coliflor *koh-lee-flor*	couveflor *cooh-veh-flohr*
Celery	apio *ah-pee-oh*	aipo *ahee-poh*
Cucumber	pepino *pay-pee-noh*	pepino *pay-pee-noh*
Lettuce	lechuga *lay-choo-gah*	alface *ahl-fahs-seh*
Peas	guisantes *gee-sahn-tays*	ervilhas *air-veel-ee-ahs*
Potatoes	patatas *pah-tah-tahs*	batatas *bah-tah-tahs*
Radishes	rabanos *rah-bah-nohs*	rabanetes *rah-bah-neh-tees*
Spinach	espinaca *ess-pee-nah-kah*	espinafres *ees-pee-nah-frees*
Turnip	nabo *nah-boh*	nabo *nah-boh*
Watercress	berros *ber-rohs*	agrião *ah-gree-ahon*
Eggs	huevos *way-vohs*	ovos *oh-voos*
Boiled	pasados *pah-sah-dos*	cozidos *coo-see-dohs*
Fried	fritos *free-tohs*	estrellados *es-trail-lah-dohs*
Omelette	tortilla *torr-teel-l'yah*	omeleta *oh-mail-ait-tah*
Poached	escalfados *ess-kahl-fah-dohs*	banhomaria *bahn-yoh-mah-ree-ah*
Fruits	frutas *fruh-tahs*	fructas *frooh-tahs*
Apples	manzanas *mahn-sah-nahs*	maçãs *mahs-sahns*
Apricots	albaricoques *ahl-bah-ree-koh-kays*	damascos *dah-mahs-coos*
Banana	banana *bah-nah-nah*	banana *bah-nah-nah*
Cherries	cerezas *say-ray-sahs*	cerejas *say-ray-jahs*
Figs	higos *ee'gohs*	figos *fee-gohs*

	SPANISH	PORTUGUESE
Gooseberries	uvas espinas *oo-vahs ess-pee-nahs*	amora *ah-moh-rah*
Grapes	uvas *oo-vahs*	uvas *oo-vahs*
Lemon	límón *lee-mohn*	limão *lee-mah-ohn*
Melon	melón *may-lohn*	melão *mel-lah-ohn*
Orange	naranja *nah-rahn-hah*	laranje *lahr-ahn-jeh*
Peach	melocotón *may-loh-koh-tohn*	pecego *pes-say-goh*
Pear	pera *pay-rah*	pera *pay-rah*
Pineapple	piña *pee-n'yah*	abacaxi *ah-bah-kah-shee*
Plum	ciruela *see-roo'ay-lah*	ameixa *ah-mais-hah*
Raspberries	frambuesas *frahm-boo'ay-sahs*	framboezas *frahm-bo-ays-ahs*
Strawberries	fresas *fray-sahs*	morango *moh-rahn-goh*
Bread	pan *pahn*	pão *pah-ohn*
Biscuits	bizcochos *bis-koh-chohs*	biscoutos *bis-koo-ee-toos*
Bread—brown	pan negro *pahn nay-groh*	pão negro *pah-ohn naih-groh*
Bread—white	pan blanco *pahn blahn-koh*	pão branco *pah-ohn brahn-koh*
Toast	tostada *tohs-tah-dah*	torrada *toh-rah-dah*
Dessert	postre *pohs-tray*	doces *doh-says*
Cake	pastel *pahs-tell*	bolo *boh-loh*
Ice Cream	crema helada *kray-mah ay-lah-dah*	sorvete *sohr-vay-tay*
Pie	torta *tohr-tah*	torta de frutas *tohr-tah day froo-tahs*
Pudding	pudin *poo-din*	pudim *poo-deem*
Sauce	salsa *sahl-sah*	molho *moyl-yoh*

	SPANISH	PORTUGUESE
Tart	torta *tohr-tah*	torta *tohr-tah*
Beverages	bebidas *beh-bee-das*	bebidas *beh-bee-dahs*
Beer	cerveza *sair-vay-sah*	cerveja *sair-vay-jah*
Brandy	cognac *koh-nahck*	aguardente *ah-goo-ahr-dain-tay*
Cider	sidra *see-drah*	cidra *see-drah*
Claret	vino de Burde-os *vee-noh day boor-day-ohs*	claret *klahr-ett*
Cocoa	cocoa *koh-koh-ah*	chocolate *show-koh-lah-tay*
Coffee	café *kah-fay*	café *kah-fay*
Cream	crema *kray-mah*	creme *kray-may*
Gin	ginebra *hee-nay-brah*	genebra *gee-nay-brah*
Ginger-ale	cerveza picante *sair-vay-sah pee-kahn-tay*	refresco de ginja *ray-frays-koh day geen-jer*
Lemonade	limonada *lee-moh-nah-dah*	limonada *lee-moh-nah-dah*
Milk	leche *lay-chay*	leite *lay-ee-teh*
Tea	té *tay*	chá *shah*
Water	agua *ah-gwah*	agua *ah-goo-ah*
Whiskey	whiskey *wis-kee*	whiskey *whis-kee*
Wine	vino *vee-noh*	vinho *veen-ee-oh*
Dishes	fuentes *foo-ehn-tays*	louça *loh-sah*
Bottle	botella *boh-tay-l'yah*	garrafa *gah-rah-fah*
Bowl	palangana *pah-lahn-gah-nah*	tigela *ti-jay-lah*

	SPANISH	PORTUGUESE
Cruet	salvilla *sahl-vee-l'yah*	garrafa *gah-rah-fah*
Cup	taza *tah-sah*	chicara *shee-kah-rah*
Decanter	botellón *boh-tay-l'yohn*	garrafa *gah-rah-fah*
Dish	fuente *foo-ehn-tay*	travessa *trah-vay-sah*
Fork	tenedor *ten-nay-door*	garfo *gahr-foh*
Glass	vaso *vah-soh*	copo *koh-poh*
Jug	jarra *hah-rah*	garra *jah-rah*
Knife	cuchillo *kuh-cheel-l'yoh*	faca *fah-cah*
Ladle	cucharón *koo-chah-ron*	concha *kohn-cha*
Plate	plato *plah-toh*	prato *prah-toh*
Saucer	platillo *plah-teel-l'yoh*	pires *pee-rehs*
Spoon	cuchara *koo-chah-rah*	colher *cool-lee-ayr*
Spoon (tea)	cucharita *koo-chah-ree-tah*	colher de chá *cool-lee-ayr day shah*
Spoon (dessert)	cucharilla *kuh-chah-ree-l'yah*	colher de doce *cool-lee-ayr day doh-say*
Teapot	tetera *tay-tay-rah*	bule *boo-leh*
Wine-glass	copa *koh-pah*	copo *koh-poh*
Miscellaneous	misceláneo *mees-cell-ah-nay-o*	diversos *dee-vayr-sohs*
Breakfast	desayuno *day-sah-you-noh*	almoço *ahl-mohs-soh*
Dinner	comida *koh-mee-dah*	jantar *jahn-tahr*
Supper	cena *say-nah*	ceia *say-ee-ah*
Lunch	almuerzo *ahl-moo-err-soh*	merenda *mayr-ayn-dah*
Meal	comida *koh-mee-dah*	refeiço *reh-fay-ee-soh*

	SPANISH	PORTUGUESE
Boiled	hervido *err-vee-doh*	cozido *coo-see-doh*
Cold	frio *free-oh*	frio *free-oh*
Fried	fritos *free-tohs*	frita *free-tah*
Grilled	asada *ah-sah-dah*	assado *ah-sah-doh*
Iced	helado *ay-lah-doh*	gelada *jay-lah-dah*
Roast	asado *ah-sah-doh*	assado *ah-sah-doh*
Sweet	dulce *dool-say*	doce *doh-say*
Sour	agrio *ah-gree-oh*	acido *ah-see-doh*
Tough	duro *doo-roh*	duro *doo-roh*
Tender	tierno *tee-air-noh*	tenro *ten-roh*
Rare	poco asada *poh-koh ah-sah-dah*	pouco assado *poh-koh ahs-sah-doh*
Well-done	muy asada *moo-ee ah-sah-dah*	bem assada *beim ahs-sah-dah*
Broth	caldo *kahl-doh*	caldo *kahl-doh*
Butter	mantequilla *mahn-tay-kee-l'yah*	manteiga *mahn-tay-ee-gah*
Cheese	queso *kay-soh*	queijo *kay-joo*
Fat	gordo *gorr-doh*	gordura *gohr-doo-rah*
Lean	sin grasa *sin grah-sah*	magro *mah-groh*
Gravy	salsa *sahl-sah*	môlho *mohl-ee-oh*
Jam	conserva de frutas *kon-sair-vah day froo-tahs*	conserva de frutas *kon-ser-vah day froo-tahs*
Jelly	jalea *hah-lay-ah*	gelêa *jail-ay-ah*
Marmalade	marmolada *mahr-moh-lah-dah*	marmelada *mahr-may-lah-dah*

	SPANISH	PORTUGUESE
Mayonnaise	mayonesa *mah-yoh-nay-sah*	mayonnaise *mah-ee-ohn-nayse*
Macaroni	macarrones *mah-kah-roh-nays*	macarrão *mah-cah-rah-oon*
Mustard	mostaza *mohs-tah-sah*	mostarda *moos-tahr-dah*
Nuts	nueces *noo-ay-says*	nozes *no-sees*
Pancake	buñuelo *boo-new-ay-loh*	torta *tohr-tah*
Pepper	pimienta *pee-mee-ehn-tah*	pimenta *pee-main-tah*
Salt	sal *sahl*	sal *sahl*
Sugar	azúcar *ah-soo-kahr*	assucar *ahs-soo-cahr*
Pickles	encurtido *ehn-koor-tee-doh*	escaveche *ehs-kah-bay-shay*
Vinegar	vinagre *vee-nah-gray*	vinagre *vee-nah-gray*
Rice	arroz *ah-rohs*	arroz *ahr-rohs*
Salad	ensalada *ehn-sah-lah-dah*	salada *sah-lah-dah*
Sandwich	sandwich *sahnd-wich*	sandwich *sahnd-weech*
Soup	sopa *soh-pah*	sopa *soh-pah*
Napkin	servilleta *sair-veel-l'ay-tah*	guardanapo *goo-ahr-dah-nah-poh*
Tablecloth	mantel *mahn-tel*	toalha de mesa *too-ahl-eeah day may-sah*
Waiter	mozo *moh-soh*	garçon *gahr-sohn*

Common Expressions
(English—Spanish)

Good morning.
Buenos dias.
boo'āy-nohs dēe-ahs

Good afternoon.
Buenas tardes.
boo'āy-nahs tāhr-dehs

Good night.
Buenas noches.
boo'āy-nahs noh-chays

Last night.
Anoche.
ah-nōh-chay

This evening.
Esta noche.
ēss-tah nōh-chay

I want.
Yo quiero.
yoh kee-āir-oh

Give me.
Deme.
dāy-may

Bring me.
Tráigame.
trȳ-gah-may

If you please.
Si usted gusta.
see oo'stēd gōo-stah

Pardon me.
Perdoneme.
pair-dōn-nay-may

Thanks very much.
Muchas gracias.
mōo-chahs grah-sēe-ahs

Come here.
Venga aquí.
vēhn-gah ah-kēe

How are you?
¿Cómo está usted?
kōh-moh ess-tāh oo'stēd

Very well, thanks.
Muy bien gracias.
mōo'ee bee'ēn grah-sēe-ahs

Wait a moment.
Espere un momento.
ess-pāy-ray oon moh-mēhn-toh

Common Expressions
(English—Portuguese)

Good Morning.
Bons dias.
bohns dee-ahs

Good afternoon.
Bôas tardes.
bo-ahs tahr-days

Good night.
Bôas noites.
bo-ahs noy-tays

Last night.
A noite passada.
ah noy-itay pah-sah-dah

This evening.
Esta noite.
ehs-tah noy-itay

I want.
Eu quero.
ayoh kay-roh

Give me.
Dê-me.
day-may

Bring me.
Traga-me.
trah-gah-may

If you please.
Se faz favor.
say fawish fah-vohr

Pardon me.
Desculpe-me.
des-kul-pay-may

Thanks very much.
Muitissimo obrigado.
moo-eet-issi-moh oh-bree-gah-doh

Come here.
Venha cá.
vain-yah kah

How are you?
¿Como está?
kom-mo es-tah

Very well, thanks.
Muito bem, obrigado.
moo-eet-oh bahin, oh-bree-gah-doh

Wait a moment.
Espere um pouco.
ehs-pay-ray oon poh-koh

At once.—Quickly.
Enseguida — pronto.
ehn-say-gēe-dah prōn-toh

What do you want?
¿Qué quiere usted?
kay kee-āir-ay oo'stēd

Listen to me.
Escúcheme.
ess-kōo-chay may

What is this?
¿Qué es esto?
kay ess ess-toh

What is the time?
¿Qué hora es?
kay oh-ra ess

Lead the way.
Enseñe el camino.
ehn-say-n'yai el kah-mee-noh

Go away.
Váyase.
vah-yah-say

Give me some more.
Deme más.
day-may mahs

Too much.
Demasiado.
day-mah-see-ah-doh

I do not understand.
No comprendo.
noh kom-prehn-doh

Do you understand?
¿Comprende usted?
kom-prehn-day oo-sted

How much?
¿Cuanto es?
kwahn-toh es

Here it is.
Aqui esta.
ah-kee ess-tah

I do not like.
No me gusta.
noh may goos-tah

I must go.
Debo irme.
day-boh eer-may

At once.—Quickly.
Já—Rapidamente.
jah rah-pee-dah-men-tay

What do you want?
¿O que deseja?
oh kay day-say-jah

Listen to me.
Escute-me.
ehs-koo-tay may

What is this?
¿O que é isto?
oh kay ay ees-toh

What is the time?
¿Que horas são?
kay oh-rah sahon

Lead the way.
Indique o caminho.
een-dee-kay oo kah-meen-yoh

Go away.
Vá-se embora.
vah-say em-bor-ah

Give me some more.
Dê-me um pouco mais.
day-may oon poh-koh myees

Too much.
Demasiado.
day-mah-see-ah-doh

I do not understand.
Não comprehendo.
noun kom-pree-en-doh

Do you understand?
¿O senhor comprehende?
oo sain-yor kom-pree-en-day

How much?
¿Quanto é?
kwan-toh ay

Here it is.
Aqui está.
ah-kee es-tah

I do not like.
Não gosto.
noun gohs-toh

I must go.
Devo ir.
day-voo eer

Allow me.
Permítame.
pair-mee-tah-may

Come in.
Entre.
ehn-tray

Don't mention it.
No hay de que.
noh ah-ee day kay

Have a seat.
Siéntese usted.
see-ain-tay-say oo'sted

Don't trouble yourself.
No se moleste.
noh say moh-less-tay

It does not matter.
No importa.
noh im-pohr-tah

Good-bye.
Adios.
ah-dee-ohs

Your health.
A su salud.
ah soo sah-lud

You are very charming.
Usted es muy bonita.
oo-sted ess moo'ee boh-nee-tah

You speak very well.
Usted habla muy bien.
oo-sted ahb-lah moo'ee bee-ehn

In Making a Call

I should like to see you again.
Me gustaría ver a usted otra vez.
may goos-tah-rēe'ah vair ah oo'stēd ōh-trah vais

I hope to meet you again.
Espero tener el gusto de ver a usted otra vez.
ess-pāir-roh tehn-āir el gōos-toh day vair ah oo'stēd ōh-trah vais

I am pleased to see you.
Me alegro de ver a usted.
may ahl-lāy-groh day vair ah oo'stēd

Certainly, with pleasure.
Sí con mucho gusto.
see kon mōo'choh gōos-toh.

Allow me.
Permitta-me.
per-mee-tah may

Come in.
Entre.
en-tray

Don't mention it.
Não tem que agradecer.
noun tym kay ah-grah-day-seer

Have a seat.
Sente-se se faz favor.
sen tay-say say fawish fah-vohr

Don't trouble yourself.
Não se encommode.
noun say ehn-kom-moh-day

It does not matter.
Não importa.
noun eem-por-tah

Good-bye.
Adeus.
ah-day-ohs

Your health.
A sua saude.
ah soo-ah say-oo-day

You are very charming.
A senhora é encantadora.
ah sain-nor-ah ay en-kahn-tah-dor-ah

You speak very well.
O senhor fala muito bem.
oo sain-yor fah-lah moo-ee-toh byem

In Making a Call

I should like to see you again.
Muito prazer teria em ver o senhor novamente.
moo-ee-toh pre-sair-ay ter-ee-ah eym vair oo sain-yor nov-aim-en-tay

I hope to meet you again.
Espero que nos encontraremos novamente.
ehs-pair-oh kay nohs en-kon-trah-ray-mos nov-aim-en-tay

I am pleased to see you.
Tenho grande prazer em o ver.
tain-yoh grahn-day pre-sair-ay eym oo vair-ray

Certainly, with pleasure.
¡Certamente, com muito prazer!
sair-tah-men-tay, kohm moo-ee-toh pre-sair-ay

I am fortunate to have met you.
He tenido suerte de haber encontrado a usted.
ay tehn-nēe-doh soo-āir-tay day ah-bāir ehn-kon-trāh-doh ah oo'stēd

It is very cold to-day.
Hace mucho frío hoy.
āh-say mōo'choh frēe'oh ōh'ee

It is very warm to-day.
Hace mucho calor hoy.
āh-say mōo'choh kah-lōhr ōh'ee

It is a damp. cold day.
Es un día húmedo y frío.
ess oon dēe'ah ōo-may-doh ee frēe'oh

It is a very sultry day.
Es un día muy sofocante hoy.
ess oon dēe-ah mōo'ee soh-foh-kāhn-tay ōh'ee

This is very beautiful.
Esto es muy hermoso.
ēss-toh ess mōo'ee air-mōh-soh

What is the name of this place.
¿Cómo se llama este lugar?
kōh-moh say ll'yāh-mah ēss-tay loo-gāhr

Give me your address.
Déme su dirección.
dāy-mee soo dee-reck-see'on

When shall I call?
¿Cuando quiere usted que venga?
kwāhn-doh kee-āir-ay oo'stēd kay vēhn-gah

Thanks ever so much for your hospitality.
Muchísimas gracias por su tan amable hospi-
moo-chēe-see-mahs grah-see-ahs por soo tahn ah-māh-blay oss-pee-
talidad.
tah-lee-dād

We have enjoyed ourselves very much.
Nos hemos divertido muchísimo.
nohs āy-mohs dee-vair-tēe-doh moo-chēe-see-moh

At the Railroad Station

When will the train start?
¿Cuando sale el tren?
kwāhn-doh sāh-lay ell trehn

What time shall we arrive at.....?
¿Ah qué hora llegaremos a.....?
ah kay ōh-rah ll'ay-gah-rāy-mohs ah.....

I am fortunate to have met you.
¡Que felicidade tel-o encontrado!
kay fel-lee-see-dah-day tay-loh en-kon-trah-doh

It is very cold to-day.
Está muito frio hoje.
es-tah moo-ee-toh free-oo oy-jay

It is very warm to-day.
Está muito quente hoje.
es-tah moo-ee-toh ken-tay oy-jay

It is a damp, cold day.
Está um dia frio e humido.
es-tah oon dee-ah free-oo ee oom-ee-doh

It is a very sultry day.
Está um dia suffocante.
es-tah oon dee-ah soo-foo-kahn-tay

This is very beautiful.
¡Isto é lindissimo!
ees-too ay leen-dees-see-moh

What is the name of this place?
¿Como se chama este logar?
koh-moh say shah-mah es-tay lo-gahr

Give me your address.
Dê-me o seu endereço.
day-may oo say-oh en-der-ay-soh

When shall I call?
¿Quando acha mais conveniente que eu volte?
kwan-doh ah-sha myish kon-vay-nee-ehn-tay kay oh vohl-tay

Thanks ever so much for your hospitality.
Muitissimo obrigado pela sua hospitali-
moo-it-tiss-ee-moh oh-bree-gah-doh pay-lah soo-ah ohs-pit-ahl-lee-
dade.
dah-day

We have enjoyed ourselves very much.
Divertimos-nos muitissimo.
dee-vehr-tee-mohs-nos moo-tees-see-moh

At the Railroad Station

When will the train start?
¿Quando partirá o trem?
kwan-doh per-teer-rah oo tryehm

What time shall we arrive at.....?
¿A que horas chegaremos a.....?
ah kay or-rahs shay-gahr-ray-mohs ah.....

I want a cab.
Quiero un coche.
kee-āīr-oh oon kōh-chay

Take me to.....Hotel.
Lléveme al Hotel.....
ll'ay-vay-may ahl oh-tēll.....

How much do I owe you?
¿Cuánto le debo?
kwāhn-toh lay dāy-boh

Please pay the driver.
Sírvase pagar al cochero.
sēer-vah-say pah-gāhr ahl koh-chāy-roh

About Town

What is there of interest in this town?
¿Qué cosas interesantes hay en este ciudad?
kay kōh-sahs in-tay-ray-sāhn-tays āh'ee ehn ehs-teh see-oo-dahd

Which way shall we go?
¿Por que camino debemos ir?
porr kay kah-mēe-noh day-bāy-mohs e-er

How much will it cost?
¿Cuanto costará?
kwāhn-toh kohs-tah-rāh

What is the name of this street?
¿Qué calle es esta?
kay kāhl-l'yay ess ess-tāh

Where can I buy.....?
¿Donde puedo comprar?
dōn-day poo'āy-doh kohm-prāhr

Where is the Post-Office?
¿Donde está la oficina de correos?
dōn-day ess-tāh lah oh-fee-see-nah day kor-rāy-ohs

Where is the United States Consulate?
¿Dónde está el Consulado de Norte America?
dōn-day ess-tāh ell kon-soo-lāh-doh day nōr-tay ah-māy-ree-kah

Direct me to a good restaurant.
Dígame donde hay un buen restaurant.
dēe-gah-may dōn-day āh'ee oon bōo'en ress-tahw-rāhnt

Take me to.....railroad station.
Lléveme a la estación de.....del ferro-carril.
ll'yai-vay-may ah lah ess-tah-see-on day.....dell fehr-roh-kah-reel

Meet me at — o'clock.
Espéreme en — a las—
ess-pāy-ray-may ehn— ah— las—

I want a cab.
Desejo uma carruagem.
day-say-joh oo-mah kahr-roo-ah-jay

Take me to....Hotel.
Leve-me ao hotel.....
lay-vay may ahoh oh-tell

How much do I owe you?
¿Quanto lhe devo?
kwahn-toh lay day-voh

Please pay the driver.
Se faz favor pague ao cocheiro.
say fawish fah-vohr pah-gay ahoh koo-shay-roh

ABOUT TOWN

What is there of interest in this town?
¿Quaes são os pontos mais interessantes
kwa-ish sah-oon ohs pohn-tohs my-ish een-tair-ray-sahn-tays
n'esta cidade?
n'es-tah see-dah-day

Which way shall we go?
¿Que direcção deveremos tomar?
kay deer-ray-sahon day-vay-ray-mos toh-mahr

How much will it cost?
¿Qual será o custo?
kwahl say-rah oh koos-toh

What is the name of this street?
¿Como se chama esta rua?
koh-moh say shah-mah ehs-tah roo-ah

Where can I buy.....?
¿Onde posso comprar.....?
ohn-day pos-soh kohm-prahr....

Where is the Post-Office?
¿Onde é o Correio-Geral?
ohn-day ay oh kor-ray-oh jay-rall

Where is the United States Consulate?
¿Onde é o Consulado dos Estados Unidos?
ohn-day ay oh kohn-sool-lah-doh dohs ehs-tah-dohs oo-nee-dohs

Direct me to a good restaurant.
Indique-me um bom restaurante.
een-dee-kay may oom bohm rays-tow-rahn-tay

Take me to.....railroad station.
Leve-me á estação da estrada de ferro.....
lay-vay-may ah es-tah-sahon dah ehs-trah-dah day fay-roh

Meet me at.....o'clock.
Espere-me ás.....horas.
es-pair-ray may ahs.....or-rays

Where can I buy some post-cards?
¿Donde puedo comprar unas postales?
dōn-day poo-āy-doh kohm-prāhr ōō-nahs pohs-tāh-lays

I thank you for your courtesy.
Le doy las gracias por su fineza.
lay doy lahs grāh-see-ahs por soo fee-nāy-sah

Give me a match, please.
Haga el favor de darme un fosforo.
āh-gah el fah-vōhr day dāhr-may oon fōhs-foh-roh

Where is the telegraph office?
¿Donde esta la oficina del telégrafo?
dōn-day ess-tāh lah oh-fee-sēē-nah dell tell-lay-grah-foh

Give me the names of the best theaters.
Digame los nombres de los mejores teatros.
dēē-gah-may lohs nōm-brays day lohs may-hōh-rais tay-āh-trohs

What is playing there at present?
¿Qué función dan allí ahora?
kay foon-see-ōn dahn ahl-l'yēē ah-ōh-rah

We must get back by — o'clock.
Debemos estar de vuelta a las—
day-bāy-mohs ess-tāhr day voo'ell-tah ah lahs

We will return now.
Regresaremos ahora.
ray-gray-sah-rāy-mohs ah-ōh-rah

At the Hotel

I desire to engage a room.
Deseo tomar un cuarto—
day-sāy-oh toh-māhr oon kwāhr-toh—

What are your lowest terms?
¿Cual es su precio más bajo?
kwahl ess soo prāy-see-oh mahs bāh-hoh

I want a double-bedded room.
Deseo un dormitorio de matrimonio.
day-sāy-oh oon dor-mee-tōh-ree-oh day mah-tree-mōh-nee-oh

Call me at.....o'clock.
Llámeme a las.....
ll'yāh-may-may ah lahs.....

I want my clothes pressed.
Deseo que me planchen la ropa.
day-sāy-oh kay may plāhn-chen lah rōh-pah

I want them.....
La necesito mañana temprano.
lah nay-say-sēe-toh mah-n'yāh-nah tehm-prāh-noh

Where can I buy some post-cards?
¿Onde posso comprar alguns cartões postaes?
ohn-day pos-soh kom-prahr ahl-goonsh kahr-toy-es pos-tah-ays

I thank you for your courtesy.
Muitissimo obrigado pela sua gentileza.
muy-tees-see-moh oh-bree-gah-doh pay-lah soo-ah jen-teel-lay-sah

Give me a match, please.
Dê-me um phosphoro se faz favor.
day-may oon fos-fohr-roh say fawish fah-vohr

Where is the telegraph office?
¿Onde é a estação dos telegraphos?
on-day ay ah ehs-tah-sah-ohn dohs tel-lay-grahf-fos

Give me the names of the best theaters.
Dê-me o nome dos melhores theatros.
day-may oo noh-may dohs mail-yor-rays tay-ah-trohs

What is playing there at present?
¿O que estão representando lá hoje?
oh kay ehs-tah-on ray-pray-sen-tahn-doh lah oy-jay

We must get back by.....o'clock.
Nós devemos voltar ás.....horas.
nohs day-vay-mohs vohl-tahr ahs.....oh-rahs.

We will return now.
Agora vamos embora.
ah-gor-rah vah-mohs em-boh-rah

At the Hotel

I desire to engage a room.
Desejo um quarto.
day-say-joh oom kwar-toh

What are your lowest terms?
¿Quaes são os seus menores preços?
kwaysh sah-oon ohs say-ohs may-nohr-rays pray-sohs

I want a double-bedded room.
Quero um quarto com duas camas.
ker-roh oom kwar-toh kohm doo-ahs kahm-mahs

Call me at.....o'clock.
Chame-me ás.....horas.
shah-may may ahs.....oh-rahs

I want my clothes pressed.
Desejo a minha roupa passada.
day-say-joh ah meen-yah roh-pah pah-sah-dah

I want them.
Desejo-as.
day-say-joh ahs

Where is the hairdresser's?
¿Dónde está la peluquería?
dōn-day ess-tāh lah pay-loo-kay-rēe-ah

I want a hot bath.
Deseo un baño caliente.
day-sāy-oh oon bāh-n'yoh kah-lee-ēhn-tay

Bring me some hot water.
Tráigame un poco de agua caliente.
trў-gah-may oon pōh-koh day āh-gwah kah-lee-ehn-tay

What is your name?
¿Cómo se llama usted?
kōh-moh say ll'yāh-mah oo'stēd

I want my (tea, coffee, chocolate) in my room in the morning.
Deseo el (té, café, chocolate) por la ma-
day-sāy-oh ell (tay, khaf-fāy, choh-kok-lāh-tay) porr la mah-
ñana en mi cuarto.
n'yāh-nah ehn mee kwāhr-toh

I want these clothes washed.
Deseo que me laven esta ropa.
day-sāy-oh kay may lāh-vehn ēss-tah rōh-pah

When can I have them back?
¿Cuando estará lavada?
kwāhn-doh ess-tah-rāh lah-vāh-dah

Bring me some soap and towels.
Tráigame jabón y toallas.
trў-gah-may hah-bōn ee toh-āhl-l'yahs

Direct me to the.....Bank.
Dígame donde está el Banco.....
dēe-gah-may dōn-day ess-tāh ell bāhn-koh.....

Give me the bill.
Deme la cuenta.
dāy-may lah kwēhn-tah

Please forward my mail to this address.
Haga el favor de remitir mi correspondencia
āh-gah ell fah-vōhr day ray-mee-tēer mee koh-ress-pon-dēhn-see'ah
á esta dirección.
ah ēss-tah dee-reck-see'ōn

I do not understand Spanish.
No comprendo el español.
noh kom-prēhn-doh ell ess-pah-n'yōhl

Can I get a tramcar near here?
¿Puedo tomar un tranvía por aquí cerca?
poo-āy-doh toh-māhr oon trahn-vēe-ah porr ah-kēe sēr-kah

Where is the hairdresser's?
¿Onde é o cabelleireiro?
ohn-day ay oo kah-bell-lay-ray-roh

I want a hot bath.
Desejo um banho quente.
day-say-joh oom bahn-yoh ken-tay

Bring me some hot water.
Traga-me agua quente.
trah-gah may ah-gwah ken-tay

What is your name?
¿Como se chama?
koh-moh say shah-mah

I want my (tea, coffee, chocolate) in my room in the morning.
Desejo o meu (chá, café, chocolate) no meu quarto pela manhã.
day-say-joh oo may-oh (shah, kah-fay, show-koh-lah-tay) noh may-oh kwar-toh pay-lah mahn-yah

I want these clothes washed.
Desejo esta roupa lavada.
day-say-joh ehs-tah roh-pah lah-vah-dah

When can I have them back?
¿Quando estará prompta?
kwahn-doh ehs-tah-rah prohmp-tah

Bring me some soap and towels.
Traga-me sabão e toalhas.
trah-gah may sah-bah-oh ay toh-ahl-yahs

Direct me to the.....Bank.
Indique-me o Banco..... se faz favor.
een-dee-kay may oh bahn-koh.....say fawish fah-vohr

Give me the bill.
De-me a conta.
day may ah kohn-tah

Please forward my mail to this address.
Se faz favor remetta toda a minha correspondencia para este endereço.
say fawish fah-vohr ray-met-tah toh-dah ah meen-yah kohr-res-spon-den-see-ah pah-rah ehs-tay en-dehr-ray-soh

I do not understand Portuguese.
Não comprehendo Portuguez.
noun kohm-pray-ehn-doh pohr-too-gays

Can I get a tramcar near here?
¿Onde posso tomar o bonde proximo aqui?
ohn-day pos-soh toh-mahr oh bohn-day prahs-see-moh ah-kee

In the Stores

I want to buy.....
Necesito comprar.....
nay-say-sēe-toh kom-prāhr

Show me.....
Enséñeme.....
ehn-sāy-n'yai-may

This is too small (large).
Este es demasiado pequeño— (grande).
ēss-tay ess day-mah-see-āh-doh pay-kāy-n'yoh—grāhn-day

What is the price of this?
¿Cuanto vale este?
kwāhn-toh vāh-lay ēss-tay

I will buy this.
Compraré este.
kom-prah-rāy ēss-tay

What is that?
¿Qué es eso?
kay ess ēss-soh

Have you nothing better?
¿No tiene usted nada mejor?
noh tēe-ay-nay oo'stēd nāh-dah may-hōrr

Have you anything cheaper?
¿Tiene usted algo más barato?
tēe-ay-nay oo'stēd āhl-goh mahs bah-rāh-toh

I don't care for any of these.
No me gusta ninguno de estos.
noh may gōos-tah nin-gōo-noh day ēss-tohs

I will take them (it).
Lohs llevaré —lo llevaré.
lohs ll'yai-vah-rāy—loh ll'yai-vah-rāy

I am living in.....Street, No.....
Vivo en la calle.....número.....
vēe-voh ehn lah kāhl-l'yay.....nōo-may-roh.....

Send them to this address.
Envíelos a esta dirección.
ehn-vēe'ay-lohs ah ēss-tah dee-reck-see-ōn

At the Hairdresser's

I want my hair cut.
Necesito cortarme el pelo.
nay-say-sēe-toh kohr-tāhr-may ell pāy-loh

I want a shampoo.
Deseo un champú (seco).
day-sāy-oh oon chahm-poo (sāy-koh)

In the Stores

I want to buy.....
Desejo comprar.....
day-say-joh kohm-prahr.....

Show me.....
Se faz favor mostre-me.....
say fawish fah-vohr mohs-tray may.....

This is too small (large).
Este é muito pequeno (grande).
es-tay ay moo-eet-toh pay-kay-noh (grahn-day)

What is the price of this?
¿Quanto custa isto?
kwan-toh koos-tah ees-toh

I will buy this.
Comprarei este.
kohm-prahr-ray ehs-tay

What is that?
¿O que é isso?
oh kay ay ees-soh

Have you nothing better?
¿Não tem nada melhor?
noun tym nah-dah mail-yohr

Have you anything cheaper?
¿Tem outro mais barato?
tym oh-troh mah-eesh bah-rah-toh

I don't care for any of these.
Não desejo nenhum d'estes.
noun day-say-joh nain-oom day'es-tays

I will take them (it).
Tomarei-os (tomarei-o).
toh-mah-ray ohs (toh-mah-ray oh)

I am living in.....Street, No.....
Moro na Rua..... No.....
mor-roh nah roo-ah.....noom-may-roh.....

Send them to this address.
Remetta-os para este endereço.
ray-may-tah ohs pah-rah ehs-tay en-day-ray-soh

At the Hairdresser's

I want my hair cut.
Desejo meu cabello cortado.
day-say-joh may-oh kah-bail-loh kor-tah-doh

I want a shampoo.
Desejo-o cabello lavado.
day-say-joh oo kah-bail-loh lah-vah-doh

Yes, that is all right.
Sí, está bien.
see ess-tāh bēe'en

Wave my hair and curl it a little.
Ondée el pelo y rícelo un poco.
ohn-dāy'ay ell pāy-loh ee rēe-say-loh oon pōh-koh

Bring me a little powder —white —pink.
Tráigame algún polvo —blanco —rosa.
trȳ-gah-may ahl-gōon pōll-voh—blāhn-koh—rōh-sah

How much do you charge?
¿Cuánto carga usted?
kwahn-toh kahr-gah oo'sted

Yes, that is all right.
Sim senhor, está muito bem.
seem sain-yohr ehs-tah moo-ee-toh bym

Wave my hair and curl it a little.
Desejo o meu cabello um pouco frisado e
day-say-joh oo may-oh kah-bail-loh oom poh-koh free-sah-doh ay
ondulado.
ohn-doo-lah-doh

Bring me a little powder—white—pink.
Traga-me um pouco de pó de arroz —branco —
trah-gah may oom poh-koh day paw day ahr-rohs—brahn-koh—
carmim.
kahr-meen

How much do you charge?
¿Quanto cobra o senhor?
kwan-toh koh-brah oo sain-yohr

WEIGHTS AND MEASURES

METRIC SYSTEM

Linear Measure

Millimeter	0.001	Meter	0.0394 Inch
Centimeter	0.01	Meter	0.3937 Inch
Meter	1.	Meter	39.37 Inches (1.09 Yards)
Kilometer	1,000.	Meters	0.62137 Mile

Surface Measure

Are	100	Square Meters	119.6 Square Yards
Hectare	10,000	Square Meters	2.471 Acres

Dry Measure

Liter	1	Liter	.908 Quarts
Dekaliter	10	Liters	1.135 Pecks
Hectoliter	100	Liters	2.837 Bushels

Avoirdupois Weight

Milligram	.001	Gram	.0154	Grain
Gram	1.	Gram	15.432	Grains
Hectogram	100.	Grams	3.5274	Ounces
Kilogram	1,000.	Grams	2.2046	Pounds
Metric Ton	1,000,000.	Grams	2204.6	Pounds

WEIGHTS AND MEASURES

United States Standard

Linear Measure

Inch	2.54	Centimeters
Foot	.3048	Meters
Yard	.9144	Meters
Rod	5.029	Meters
Mile	1.6093	Kilometers

Square Measure

Square Inch	6.452	Square Centimeters
Square Foot	.0929	Square Meters
Square Yard	.836	Square Meters
Square Rod	25.29	Square Meters

Surface Measure

Acre	.4046	Hectare
Square Mile	259.	Hectares

Cubic Measure

Cubic Inch	16.39	Cubic Centimeters
Cubic Foot	.0283	Cubic Meter
Cubic Yard	.7645	Cubic Meter
Cord	3.624	Cubic Meter

Dry Measure

Quart	1.101	Liters
Gallon	3.785	Liters
Peck	8.809	Liters
Bushel	35.24	Liters

Avoirdupois Weight

Ounce	28.35	Grams
Pound	.4536	Kilograms
Ton (long)	1.0161	Metric Ton
Ton (short)	.9072	Metric Ton

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